Russian Strategic Aviation TODAY

Николай
Кузнецов

Yefim Gordon &
Dmitriy Komissarov

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Russian Strategic Aviation Today looks at all aspects of the Russian fleet of *Blackjack, Bear* and *Backfire* aircraft including their missiles, bombs and service with the 37th Air Army.

Many uses of these famous aircraft are featured including Vladimir Putin's 2005 ride in a Tu-160 when he participated in a major exercise and performed a live missile launch. Recent exercises undertaken by the 37th Air Army are illustrated with numerous photographs and the famous visit of two Tu-160s to Venezuela is detailed when they caused much consternation in the USA.

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The Tu-22M3 is one of the three principal types operated by Russia's Long-Range Aviation.

Introduction

The Long-Range Aviation (DA – *__Dahl'__nyaya avi__ah__tsiya*) is the principal strike component of the Russian Air Force. It is also a component of Russia's strategic nuclear forces. The DA is meant to perform strategic, theatre-strategic and operational missions on continental and maritime (oceanic) theatres of operations and in strategically important areas. More specifically, the DA is intended for effectively and accurately striking at targets of importance, such as airbases, aircraft carriers, ships armed with sea-launched cruise missiles (SLCMs), power stations and energy supply infrastructure, military and political command and control centres, defence industry plants (such as ammunition factories), major fuel depots, railway junctions, highway junctions, seaports and the like with precision-guided long-range air-launched cruise missiles and bombs of various calibres (both nuclear and conventional). The prevalent opinion in Russia is that skilful and timely use of the DA in a specific military threat situation is an important component of Russia's national security strategy in the military sphere.

On 23rd December 2008 the Russian Long-Range Aviation celebrated its 95th anniversary. Until recently the DA was merely the aviation element of Russia's strategic nuclear triad. The only other country in the world to have comparable strategic nuclear forces is the USA. However, with the possibility of an all-out or large-scale nuclear war becoming less likely, both nations have shown a tendency to expand the range of tasks solved by strategic (long-range) bombers in conventional warfare.

On 10th February 2009 the Commander-in-Chief of the Russian Air Force Colonel-General Aleksandr Zelin told journalists about the development prospects of the Russian Air Force. Among the tasks at the top of the priority list he named *'developing the aviation component of the strategic offensive forces for the purpose of maintaining nuclear and non-nuclear deterrence'*. The forthcoming modernisation of the Long-Range Aviation should substantially increase its combat potential, which will be a major contribution to the achievement of this goal. According to the C-in-C, the DA will gain a unique operational-strategic capability, namely the ability to be a real strategic nuclear and non-nuclear deterrent simultaneously. In a conventional war, utilising precision-guided cruise missiles, the Long-Range Aviation will be capable of accomplishing a complex of key operational and operational-strategic tasks, including strikes against SLCM-armed ships in mid-ocean, strikes against multi-purpose carrier task forces sailing across the ocean and stationed in combat manoeuvring areas, destruction of the adversary's principal aviation groups on airbases in remote geographical areas, attacks on important petroleum, power supply and defence industry installations, the adversary's operative and strategic reserves, transport junctions and hubs, naval bases, the most important military and political centres, and so on.

Interestingly, many military experts nevertheless do not consider the Russian strategic bomber arm as a serious nuclear deterrent because of its high vulnerability to enemy air defence assets.

One day earlier, on 9th February, the Chief of the General Staff of the Russian Armed Forces, Army General (that is, four-star general) Nikolay Makarov made a highly important statement. After a meeting with members of the State Duma (the lower house of the Russian Parliament) to which the press was not admitted, Makarov told journalists that *'in the immediate future nuclear weapons will remain the basic stabilising factor, and their value [as such] may increase'*. In fact, this means that, should a threat to the nation arise, the Armed Forces of the Russian Federation will have the right to use nuclear weapons regardless of whether the conflict is 'global' or local (previously, the Russian military doctrine envisaged the use of nuclear weapons only for retaliatory strikes in the event of a global military conflict). In other words, Russia reserves the right to defend itself by all means available, including nuclear weapons, in the event of a military threat to it.

The backbone of the Russian Long-Range Aviation is formed by four basic types of aircraft, three of which are delivery vehicles for air-to-surface missiles (these are the Tupolev Tu-160 *Blackjack*, Tu-95MS *Bear-H* and Tu-22M3 *Backfire-C*). The fourth type, the Ilyushin IL-78/IL-78M *Midas-A/B*, is an in-flight refuelling (IFR) tanker. Other types of fixed-wing aircraft and helicopters (mostly trainers, transports and search & rescue aircraft) are auxiliary types supporting the daily activity of the DA.

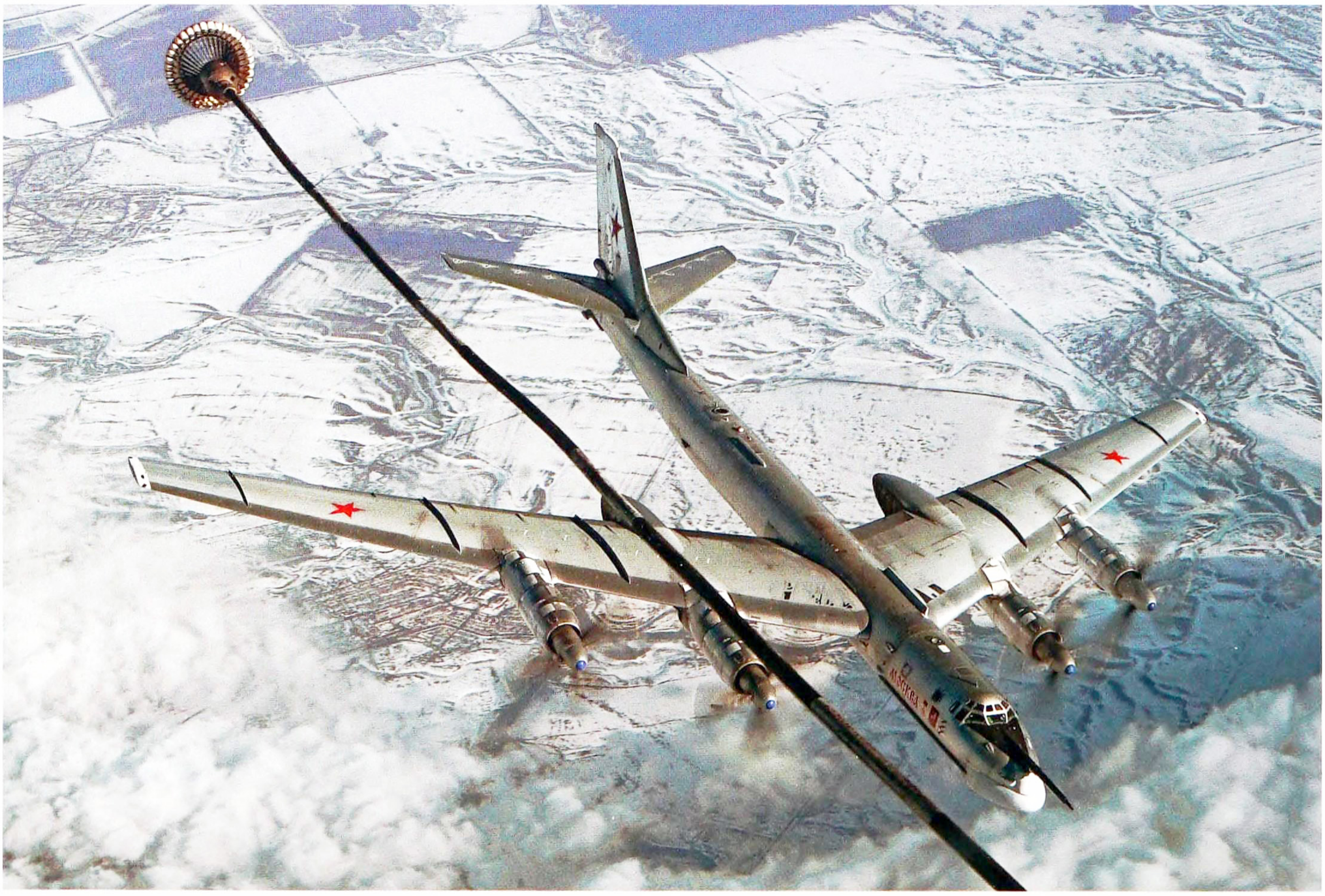
After the disintegration of the Soviet Union the Russian Federation became the legal successor of the USSR. The ex-Soviet military units stationed on Russian territory were reintegrated to become the Armed Forces of Russia, whose structure was gradually reformed; this has caused changes in the command & control structure and order of battle of the Air Force – including the DA. The Air Force was hit by personnel cuts; time-expired or

Виталий Копылов

The other two primary types are the Tu-160 (above) and the Tu-95MS.

outdated aircraft and aircraft being excluded from the Air Force inventory were transferred to storage depots or scrapped. As a result, at the end of the first decade of the 21st century the Russian Long-Range Aviation is quite unlike the Air Force grouping inherited from the Soviet Union.

All this is described in this book which is a logical sequel to the previously published volume *Soviet Strategic Aviation in the Cold War*.

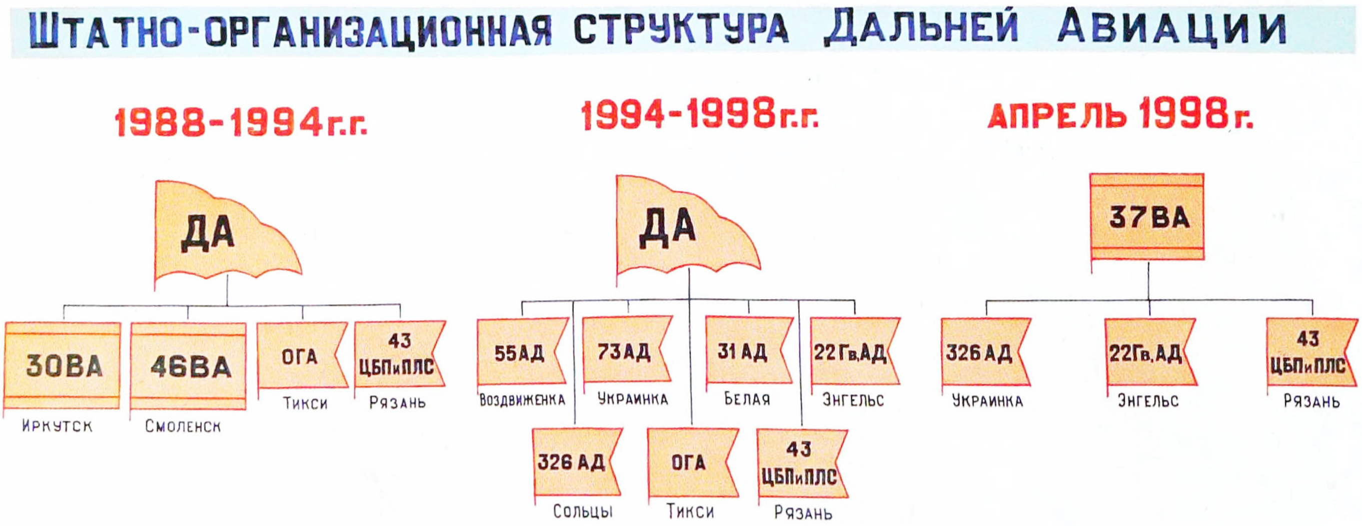


1 The Long-Range Aviation in Post-Soviet Days

At the point of the Soviet Union's demise (1991) the Long-Range Aviation comprised four heavy bomber divisions: one in the Russian Far East with two regiments of Tu-95KM and Tu-95K-22 missile carriers at Ookraïnka AB, one in Kazakhstan with two regiments of Tu-95MSs in Semipalatinsk, one in the Ukraine with two regiments at Uzin AB (with Tu-95MSs and IL-78s) and one in European Russia. The latter division headquartered in Engels included regiments based as far apart as Priluki (the Ukraine, Tu-160s), Mozdok (North Caucasus, Tu-95MSs) and Engels (southern Russia, Myasishchev 3MS-2 and 3MN-2 *Bison-B* tankers). The DA's strategic aircraft fleet (discounting Tu-22K *Blinder-B* long-range missile carriers, Tu-22R *Blinder-C* reconnaissance aircraft, Tu-22M2/ Tu-22M3 *Backfire-B/C* long-range bombers/missile carriers and assorted versions of the Tu-16 *Badger* medium bomber) amounted to 157 aircraft – 13 Tu-160s in one regiment, 83 Tu-95MSs in four regiments and 61 Tu-95KM *Bear-Bs*/Tu-95K-22 *Bear-Gs* in two regiments.

In 1991, when the Soviet Union and the USA signed the START-1 treaty (Strategic Arms Reduction Treaty), the Soviet Air Force had 162 strategic bombers carrying 855 nuclear munitions, which equalled 8.3% of the Soviet nuclear stockpile (10,271 warheads). In contrast, the USA traditionally allocated much greater importance to the Air Force component of the nuclear triad; in 1991 the US Air Force had 574 strategic bombers carrying 2,353 nuclear munitions (22.3% of the overall nuclear stockpile) at its disposal.

Much the worse for wear, after the break-up of the Soviet Union in late 1991 a considerable proportion of the former Soviet Air Force's strategic and long-range aircraft fleet was left outside Russia. As noted above, two regiments of *Bear-Hs* remained in Kazakhstan, plus more *Bear-Hs*, *Blackjacks* and *Midases* in the Ukraine. Most of the 'Kazakh' bombers were recovered fairly easily; Russia was on good terms with Kazakhstan, and in keeping with an inter-government agreement the strategic bombers


ШТАТНО-ОРГАНИЗАЦИОННАЯ СТРУКТУРА ДАЛЬНЕЙ АВИАЦИИ
1988-1994г.г.
ДА
30ВА
Иркутск
46ВА
Смоленск
ОГА
Тикси
43 ЦБПиПЛС
Рязань
1994-1998г.г.
ДА
55АД
Воздвиженка
73АД
Украинка
31 АД
Белая
22ГвАД
Энгельс
326 АД
Сольцы
ОГА
Тикси
43 ЦБПиПЛС
Рязань
АПРЕЛЬ 1998г.
37ВА
326АД
Украинка
22Гв.АД
Энгельс
43 ЦБПиПЛС
Рязань

The Long-Range Aviation's order of battle in 1988-94, in 1994-98 and in April 1998.

were traded for a considerable number of tactical jets (Mikoyan MiG-29 *Fulcrum* and Sukhoi Su-27 *Flanker* fighters and Su-25 *Frogfoot* attack aircraft) which the nascent Kazakh Air Force needed badly.

It was not so easy in the Ukraine, which was at odds with Russia over a number of political and economic issues. The independent Ukraine appropriated all 19 Tu-160s and 24 Tu-95MSs then on Ukrainian soil, as well as the IL-78 tankers, and would not let go of them. Not only that, but the Ukrainian military also laid claim to two regiments of Tu-22M3 long-range missile carriers (in Poltava and Stryy, 46 aircraft in all) and two regiments of obsolete Tu-22Ks and Tu-22Rs (at Ozyornoye and Nezhin respectively, 37 aircraft in all).

Five more units of the former 46th Air Army of the Supreme High Command were stationed in Belorussia (two regiments of Tu-22M3s in Bobruisk and Orsha, two regiments of Tu-22Ks at Machoolishchi AB, Minsk, and in Baranovichi, and a long-range reconnaissance regiment equipped with Tu-22Rs at Zyabrovka). In 1992 an agreement was signed with the Republic of Belarus allowing these units to return to Russia. The only strategic bomber unit in the Baltic States (a regiment at

Previous page: A Tu-160 with the wings at maximum sweep.

Below and right: A Tu-160 in subsonic cruise.

A Tu-160 crew discusses the mission to be flown as their aircraft is refuelled by a TZ-22 bowser.

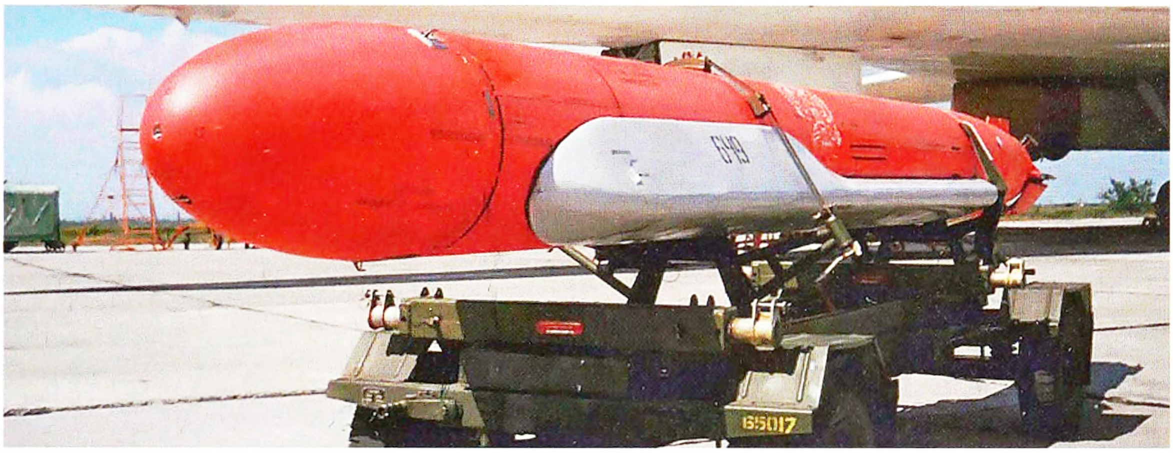
ОГНЕОПАСНО

Tartu, Estonia, equipped with Tu-22M3 and Tu-16K missile carriers) likewise moved to Russia.

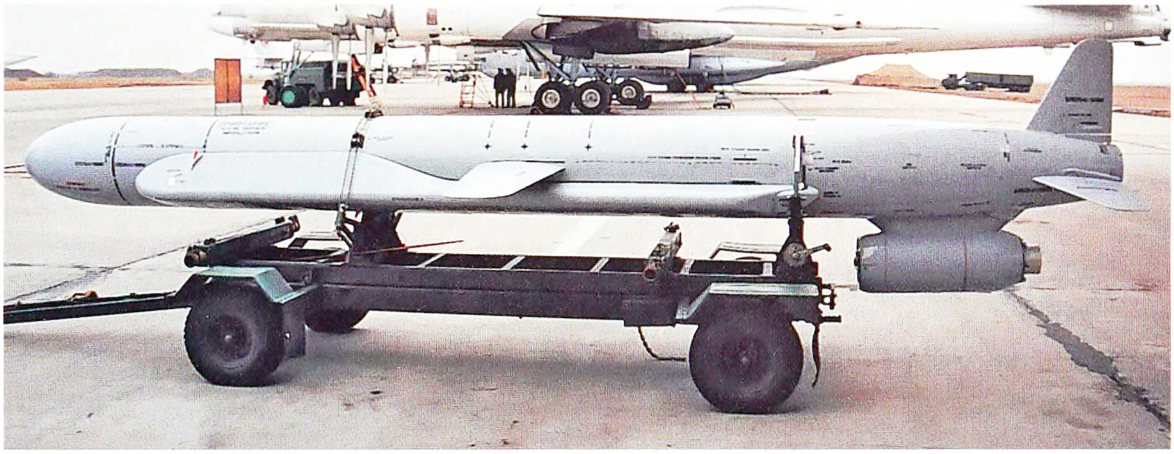
The break-up of the Soviet Union was a severe blow to the Russian Armed Forces at large, including the Long-Range Aviation. It took several years to realise the full magnitude of the losses and try to make them good by forming the DA anew from the remaining assets. In the mid-1990s the Russian govern-

The crew poses with the first *Blackjack* to be named – '05 Red' *Il'ya Muromets*.

Илья Муромец



Until recently the Kh-55SM cruise missile was the DA's main weapon. Here, a Kh-55SM sits on a ground handling dolly with wings folded. The missile's conformal tanks are clearly visible.



A Kh-55SM missile in cruise configuration with the wings, tail surfaces and engine deployed.

Long-Range Aviation order of battle: early 2008

37th (Strategic) Air Army of the Supreme High Command Unit	Base (HQ)	Aircraft
22nd *Donbasskaya* Red Banner Guards Heavy Bomber Division:	Engels	
• 121st Guards Heavy Bomber Regiment	Engels-2 AB	Tu-160
• 184th Heavy Bomber Regiment	Engels-2 AB	Tu-95MS
• 52nd Guards Heavy Bomber Regiment	Shaikovka AB	Tu-22M3
• 840th Heavy Bomber Regiment	Sol'tsy AB	Tu-22M3
326th *Tarnopol'skaya* Heavy Bomber Division:	Ookraïnka	
• 182nd Guards Heavy Bomber Regiment	Ookraïnka AB	Tu-95MS
• 79th Heavy Bomber Regiment	Ookraïnka AB	Tu-95MS
• 200th Guards Heavy Bomber Regiment	Belaya AB	Tu-22M3
• 444th Heavy Bomber Regiment	Vozdvizhenka AB	Tu-22M3
Direct reporting units of the 37th VA		
203rd Guards Independent Aerial Refuelling Regiment	Ryazan' (Dyagilevo AB)	IL-78, IL-78M
181st Independent Composite Air Squadron	Irkutsk-1 airport	An-12, An-26, An-30
199th Air Base	Ulan-Ude	
3119th Air Base	Tambov-Yuzhnyy AB	
Arctic Operations Group:	Tiksi	
• 24th Independent Airlift Squadron	Tiksi-3 airport	
43rd Combat Training & Aircrew Conversion Centre	Ryazan' (Dyagilevo AB)	Tu-95MS, Tu-22M3, Tu-134UBL, An-26
1425th Special & Physical Training Centre	Irkutsk	
Forward operating locations/auxiliary airfields	Rogachovo (Novaya Zemlya) Vorkuta Tiksi-3 Anadyr' (Oogol'nyy airport)	

'28 Red', a Tu-95MS from Engels, shows off its classic lines.

This aspect of the *Bear-H* (in this case, '55 Black') emphasises the high aspect ratio wings.

ment decided to 'optimise' the Armed Forces (and when the government starts talking of optimisation, this usually means cuts and closures). Pursuant to the Russian Armed Forces' General Staff directive No. 314/4/0714 dated 1st November 1997 the DA Commander's command structure was transformed into the 37th VA VGK (SN) (*Vozdooshnaya armiya Verkhovnovo Glavnokomahndovaniya (strategicheskovo naznacheniya)* – 37th (Strategic) Air Army of the Supreme High Command. Thus, all Long-Range Aviation assets were concentrated within a single air army. The 37th VA VGK (SN) comprised two divisions – the 22nd *Donbasskaya* Red Banner Guards Heavy Bomber Division (GvTBAD – *Gvardeyskaya tyazholaya bombardirovochnaya aviadiveeziya*) and the 326th

Tu-22M3 '28 Red' flies in 'clean' configuration with the wings at minimum sweep.

Tarnopol'skaya TBAD decorated with the Kutuzov Order (2nd Degree), as well as the 43rd Combat Training & Aircrew Conversion Centre, an independent aerial refuelling regiment, aviation commandant's offices at auxiliary airfields, and various support units.

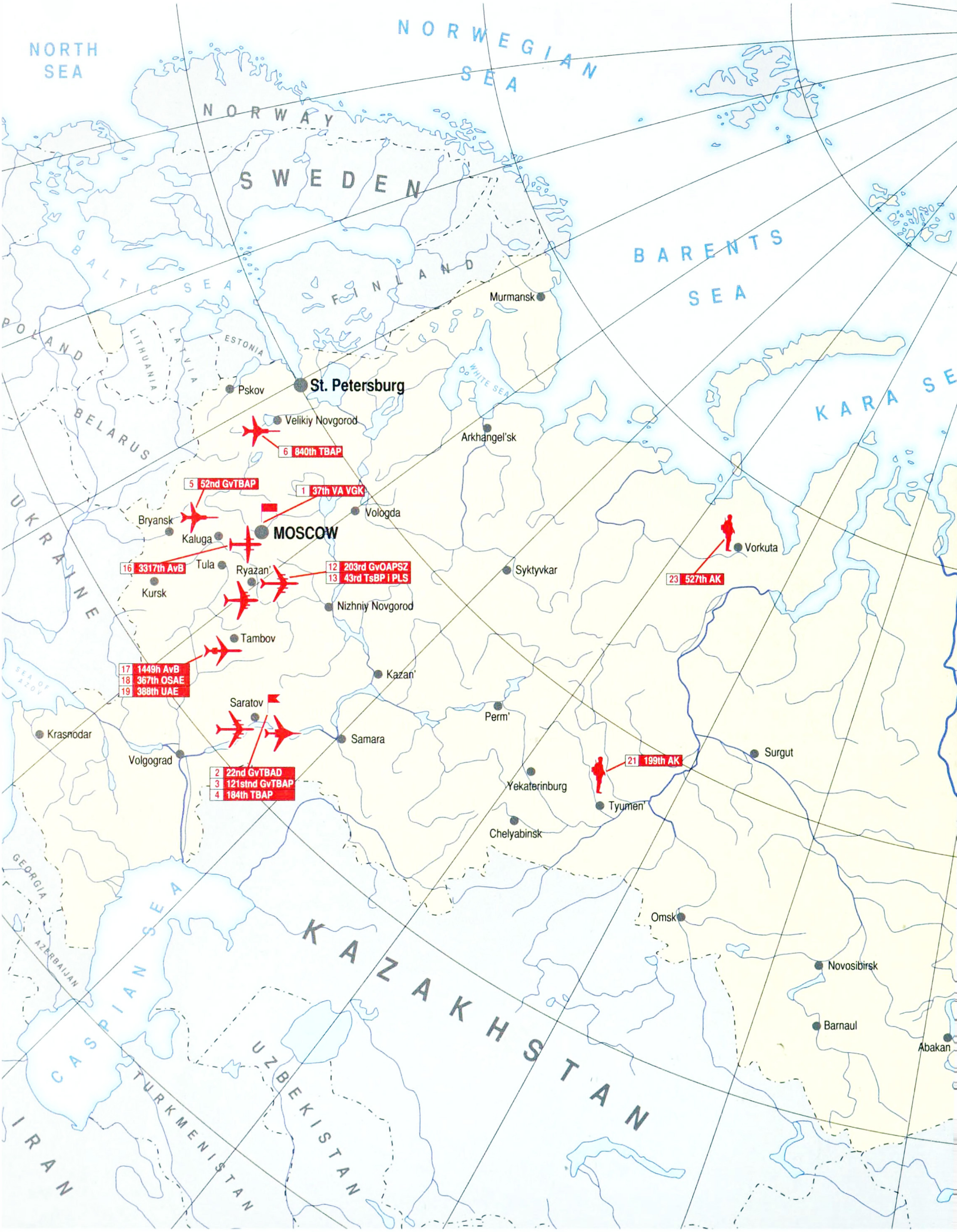
The 22nd GvTBAD comprised the 121st *Sevastopol'skiy* Red Banner GvTBAP and the 184th TBAP at Engels-2 AB, the 840th Red Banner TBAP at Sol'tsy AB and the 52nd GvTBAP at Shaikovka AB.

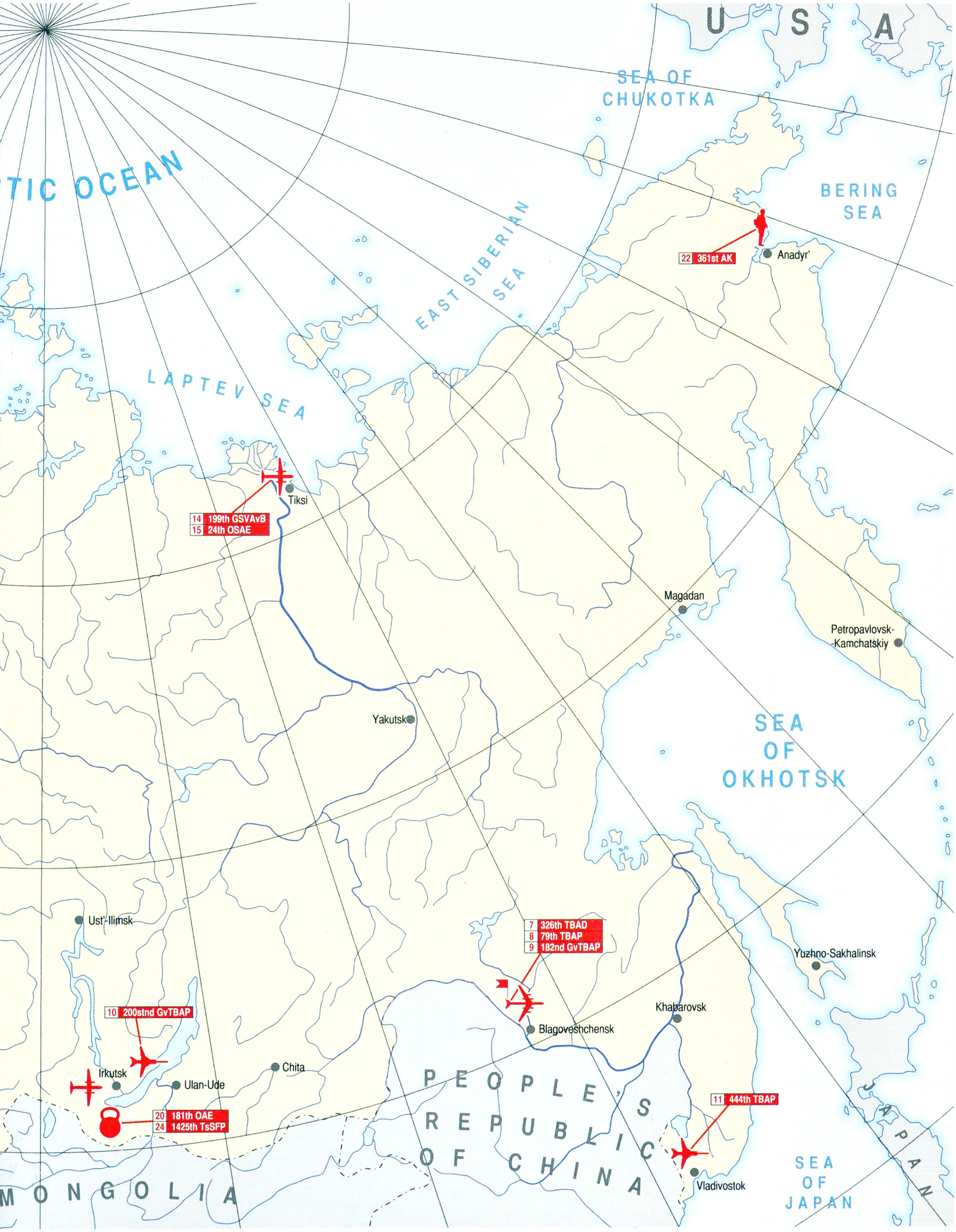
The 326th TBAD comprised the 79th TBAP decorated with the Red Star Order and the 182nd Sevastopol'sko-Berlinskiy Red Banner GvTBAP at Ookraïnka AB, the 200th *Brestskiy* Red Banner GvTBAP at Belaya AB and the 444th *Berlinskiy* TBAP decorated with the Kutuzov Order (3rd Degree) and Aleksandr Nevskiy Order at Vozdvizhenka AB.

The fleet of the 37th VA VGK (SN) numbered 64 Tu-95MSs, sixteen Tu-160s, about 120 Tu-22M3s, 20 IL-78/IL-78M tankers and

'41 Red', a 52nd GvTBAP Tu-22M3, with two Kh-22M missiles under the wings.

Overleaf: A map showing the locations of Russian Long-Range Aviation units in 2008.


NORTH SEA
NORWEGIAN SEA
BARENTS SEA
KARA SE
NORWAY
SWEDEN
FINLAND
BALTIC SEA
POLAND
LITHUANIA
LATVIA
ESTONIA
BELARUS
UKRAINE
WHITE SEA
SEA OF AZOV
GEORGIA
AZERBAIJAN
CASPIAN SEA
TURKMENISTAN
UZBEKISTAN
KAZAKHSTAN
IRAN
Murmansk
St. Petersburg
Pskov
Velikiy Novgorod
6 840th TBAP
Arkhangel'sk
5 52nd GvTBAP
1 37th VA VGK
Vologda
Bryansk
Kaluga
MOSCOW
16 3317th AvB
Tula
Ryazan'
Kursk
12 203rd GvOAPSZ
13 43rd TsBP i PLS
Nizhniy Novgorod
Syktyvkar
Vorkuta
23 527th AK
Tambov
17 1449h AvB
18 367th OSAE
19 388th UAE
Kazan'
Saratov
Perm'
Krasnodar
Samara
Volgograd
2 22nd GvTBAD
3 121stnd GvTBAP
4 184th TBAP
21 199th AK
Surgut
Yekaterinburg
Tyumen'
Chelyabinsk
Omsk
Novosibirsk
Barnaul
Abakan


U S A
SEA OF CHUKOTKA
BERING SEA
22 361st AK
Anadyr'
TIC OCEAN
EAST SIBERIAN SEA
LAPTEV SEA
Tiksi
14 199th GSVAvB
15 24th OSAE
Magadan
Petropavlovsk-
-Kamchatskiy
Yakutsk
SEA OF OKHOTSK
Ust'-Ilimsk
7 326th TBAD
8 79th TBAP
9 182nd GvTBAP
Yuzhno-Sakhalinsk
Khabarovsk
Blagoveshchensk
10 200stnd GvTBAP
Irkutsk
Ulan-Ude
Chita
20 181th OAE
24 1425th TsSFP
PEOPLE'S REPUBLIC OF CHINA
11 444th TBAP
Vladivostok
SEA OF JAPAN
JAPAN
MONGOLIA

In the early 1990s the Russian Air Force scrapped a lot of outdated or time-expired aircraft, including large numbers of Tu-22M2s which were no longer on the inventory.

Backfire-Bs at various stages of scrapping. The cockpit section has been severed in the right-hand photo.

The once awe-inspiring bombers have been reduced to scrap metal.

30 Tu-134UBL *Crusty-B* trainers. Additionally, some 90 Tu-22M2s and Tu-22M3s were in storage, while four *Blackjacks* and seven *Bear-Hs* were used in various test and research programmes.

The abovementioned General Staff directive No. 314/4/0714 transforming the DA into the 37th (Strategic) Air Army took effect

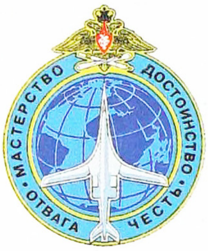
Long-Range Aviation Commander Lt.-Gen. Igor' V. Khvorov (right) and his predecessor Lt.-Gen. Mikhail M. Oparin at a festive ceremony.

in April 1998. From an organisational standpoint the command structure of the 37th VA consisted of the headquarters, individual departments, services, sections and the support department.

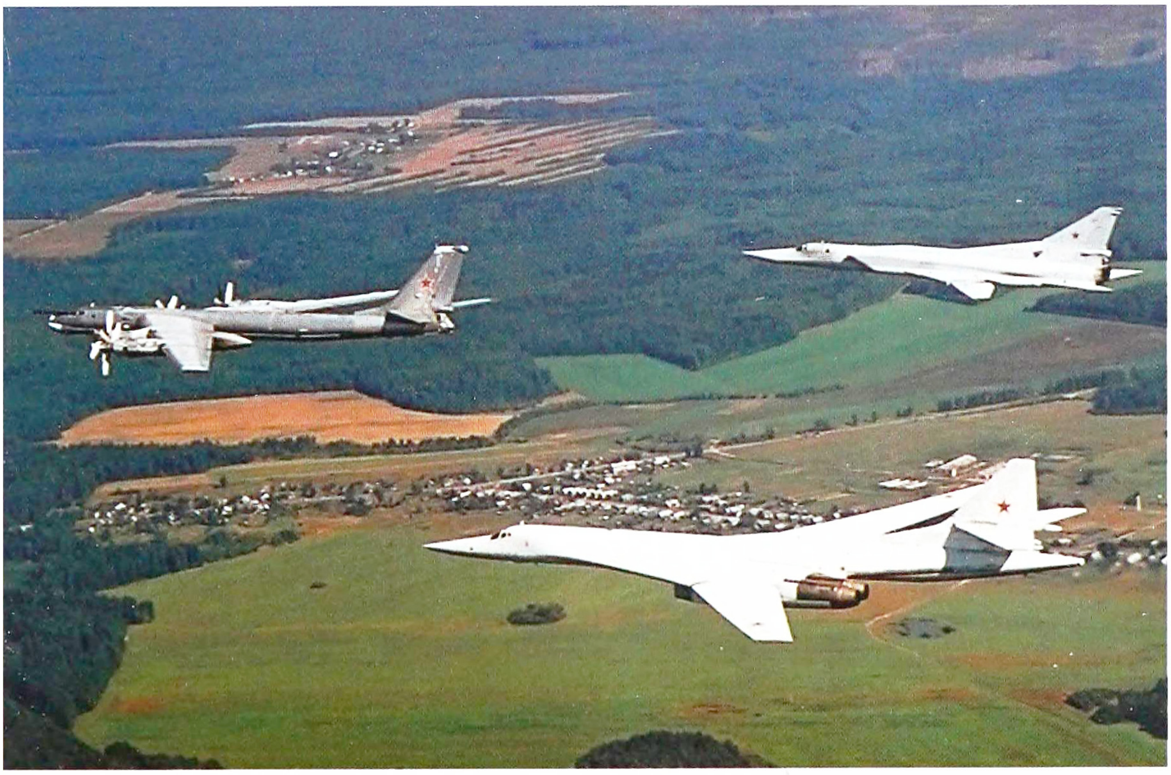
The main department of the Air Army's HQ is the operations department, which co-ordinates the work of all other departments and services of the 37th VA. The operations department is tasked with planning and executing the day-by-day activities and combat operations of the Air Army's formations and units, as well as with organising the preparation and issue of the principal documents jointly with the other departments and services.

The organisation and mobilisation department is the main body responsible for planning and implementing mobilisation measures and ensuring the required personnel strength. A further department is responsible for ensuring communications, radio technical support (that is, ground-based navigation aids and approach systems) and automated control of Long-Range Aviation formations and units. The combat training department organises and checks the combat training of Long-Range Aviation formations and units and is responsible for developing the training techniques. The personnel department exercises direct control of the DA units' work with the personnel and makes sure that the units are fully manned to cope with their tasks. The political training department provides information support of the combat training process, informing the personnel of the situation in the country and abroad; it also provides patriotic education, social and psychological aid, and cultural and recreational opportunities. Important decisions are discussed by the DA's Military Council before they are taken.

The aircraft maintenance service organises and conducts work in order to maintain the aircraft and their ground support equipment and repair facilities in serviceable and combat-ready condition on a day-to-day basis. The navigator service is the chief service associated with flight operations; its responsibilities are the theoretical and practical issues of aerial navigation and combat application and the



The Long-Range Aviation badge. The motto reads *Masterstvo, dostoinstvo, otvaga, chest'* (Skill, dignity, bravery, honour).



The Long-Range Aviation's three bomber types are seen together in this photo.

Lt.-Gen. Khvorov shakes hands with Aleksiy II, head of the Russian Orthodox Church.

organisation of navigator training. The support department of the 37th VA provides logistical support. A major role in the operations of the 37th VA is played by the intelligence service, ECM service, nuclear, biological and chemical (NBC) protection service, weather service, environmental protection service (yes, nowadays even the military have to be environmentally conscious), search & rescue service, flight safety service, automotive transportation service, legal service, accounting service and, last but not least, security and counter-intelligence service.

In the 1990s and at the beginning of new century the Long-Range Aviation was the main strike component of the Russian Air Force, being the aviation component of Russia's strategic nuclear forces and a strategic reserve of the Supreme High Command. The main objective of the Russian military-technical policy as regards development of the DA during the period from the end of the 1990s until 2009 was to maintain an adequate potential of the DA enabling it to carry out tasks of strategic and regional nuclear and non-nuclear deterrence.

The five-day armed conflict in the Caucasus in early August 2008, which revealed serious flaws in the Russian Armed Forces' command and control system, forced the nation's leaders to take drastic measures on military reform once again. They concerned first of all the ground forces and the Air Force. The four-level command chain used hitherto made it virtually impossible to exercise fast control of armies, as

The DA top command pose for a photograph with Russia's top clergy.

the August war showed; therefore it was decided to introduce a three-level system which is accepted in many countries of the world.

In the course of the planned reform, between 2009 and 2012 the Russian Air Force will switch to a three-level control system that, naturally, concerns the strategic bomber branch as well. The existing Air Armies, as well as the Air Force and Air Defence Force Armies, will be transformed into four Commands:

- Operational & Strategic Command of Aerospace Defence;
- Long-Range Aviation Command;
- Command of Military Airlift;
- Air Force and Air Defence Force Command.

The air base and aerospace defence brigade becomes the basic operative unit; such bases and brigades will be subordinated directly to the Commands. This will eliminate a superfluous link in the command chain. During the Russian Air Force's transition to the future combat organisation 30% of the officers will be made redundant. According to Commander-in-Chief of the Russian Air Force Col.-Gen. Aleksandr Zelin, in connection with the reorganisation it is necessary to reform 84% of the Air Force's military formations, of which 10% will disband, 22% will be relocated and reformed, and 68% will switch to a new personnel structure. The Russian military consider that these changes will guarantee the Air Force the ability to carry out the task of nuclear deterrence, using the aviation component of the strategic nuclear triad. Changes in the organisation of the Air Forces will not cause a major reduction of the aircraft fleet and ground services.

Thus, in the Russian Air Force it is planned to get away from aviation divisions and regiments, replacing them with air bases comprising three squadrons each (we will remind the reader that hitherto aviation regiments have usually consisted of two squadrons), and also to eliminate more than 50,000 officer posts in the organisation. Within three years on the

President of Russia Vladimir V. Putin converses with DA Commander Lt.-Gen. Igor' I. Khvorov and 22nd GvTBAD CO Maj.-Gen. Anatoliy D. Zhikharev at Engels in September 2004.

Approximate Long-Range Aviation order of battle: Autumn 2009

Long-Range Aviation Command

Air Base	Location	Reorganisation (former identity)	Aircraft
6950th AB	Engels-2 AB	Merger of the 121st GvTBAP and 184th TBAP	16 Tu-160s + 14 Tu-95MSs
6951st AB	Shaikovka A	Merger of the 52nd GvTBAP and 840th TBAP	30 Tu-22M3s?
6952nd AB	Ookraïnka AB	Merger of the 182nd GvTBAP and 79th TBAP	36 Tu-95MSs
6953rd AB	Belaya AB	Merger of the 200th GvTBAP and 444th TBAP and 181st OAE	30 Tu-22M3s, 1-3 Tu-22MRs, 3 An-30s, 1 An-26, 2 Tu-134s, 2 An-12s
6954th AB	Dyagilevo AB (Ryazan')	Former 203rd GvOAPSZ	18 IL-78s and IL-78Ms
43rd TsBP i PLS	Dyagilevo AB		4 Tu-22M3s + 4 Tu-95MSs
1449th AB	Tambov		Tu-134UBLs, An-26s
199th AB	Tiksi-3		An-12s, Mi-8s

basis of existing divisions and regiments the Air Force will establish 55 air bases, the squadrons becoming the basic organisational unit. In the area of military technology the efforts of the Air Force command will be concentrated on increasing the annual rates of updating and replacing the basic weapons, combat hardware and special equipment, and also increasing the share of upgraded and modern aircraft in the Air Force units to 90%.

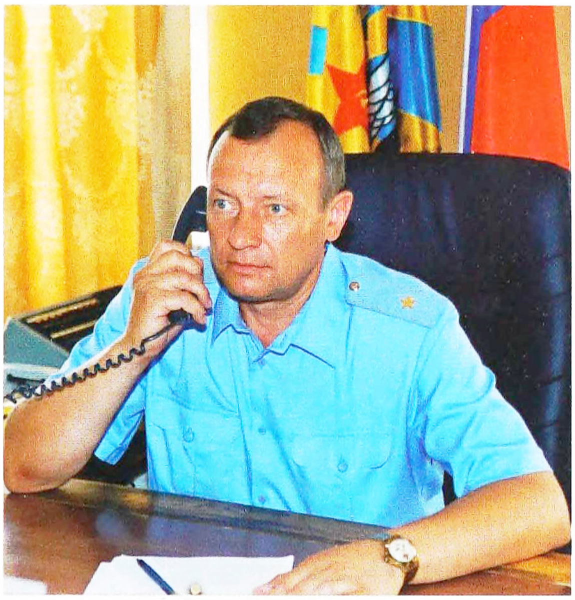
At the end of 2008 the Air Force Main HQ started abolishing the posts held by non-commissioned officers and transferring some departments and services to hired civil staff. Implementation of the schedule of bringing up the Russian Armed Forces to the prospective shape defined by the General Staff started in 2009.

At present the 37th (Strategic) Air Army of the Supreme High Command has been eliminated; instead, the Long-Range (Strategic) Aviation Command headed by the DA Commander has been organised. The Command will exercise control over the air bases whose formation began in 2009; in turn, the air squadrons will be subordinate to

Russian AF Long-Range Aviation Commanders

Col.-Gen. Igor' M. Kaloogin	since November 1990
Lt.-Gen. Mikhail M. Oparin	since November 1997
Lt.-Gen. Igor' I. Khvorov	since November 2002
Maj.-Gen. Pavel V. Androsov	since May 2007
Maj.-Gen. Anatoliy D. Zhikharev	since September 2009

Opposite page, top: Tu-22M3 '28 Red' lands with a single Kh-22M. Bottom: A parade detail with the unit banner at the beginning of an exercise.



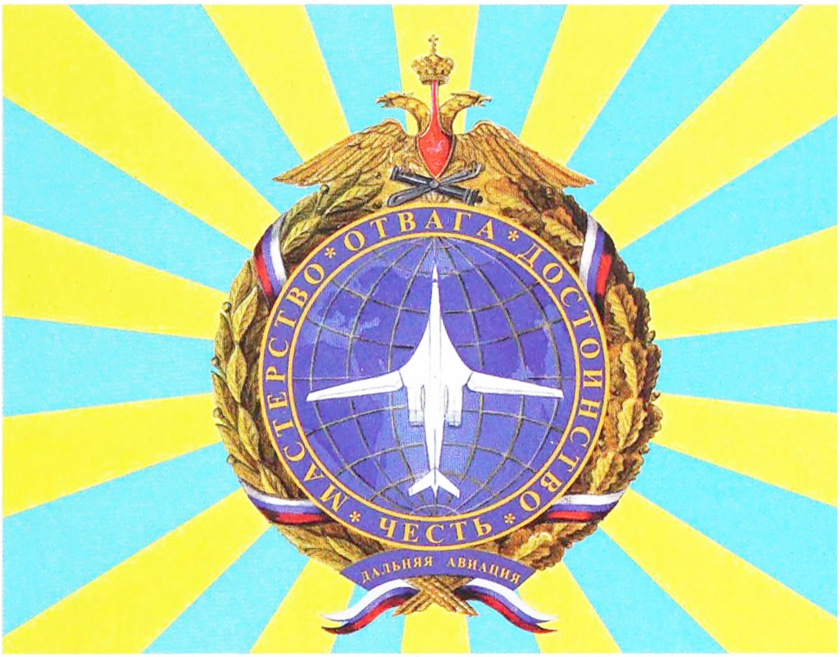
The DA's current Commander Maj.-Gen. Anatoliy D. Zhikharev.

the command of the air bases. Thus, the Russian Long-Range Aviation adopts a three-level control system.

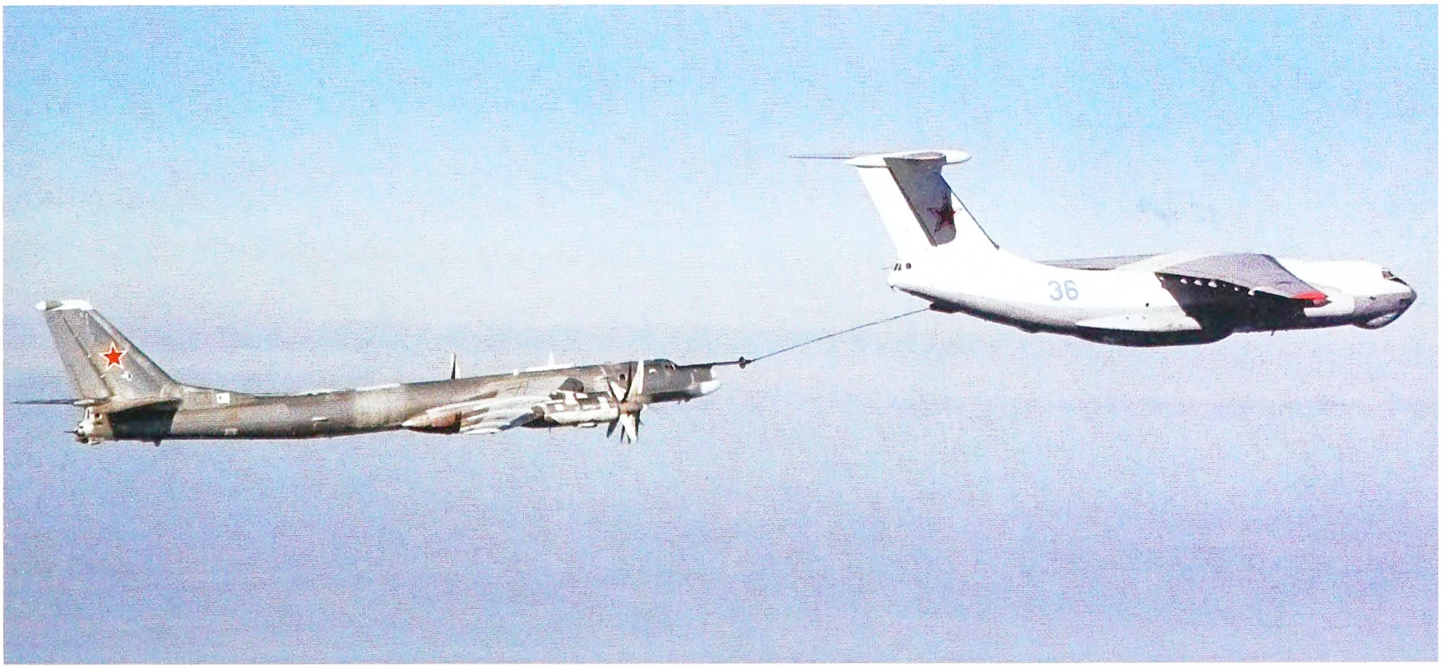
The air bases will be grouped into categories. Thus, Category 1 bases are the main operational bases whose personnel and aircraft are maintained in constant combat readiness. Category 2 bases can be storage depots for aircraft which can be rapidly returned to fully operational condition if necessary. These bases will be maintained by the commandant's offices remaining there. Thus, for example, according to plan Vozdvizhenka AB in the Amur Region is to be demoted to a Category 2 base. The resident 444th TBAP will merge with the 200th GvTBAP stationed at Belaya AB (a Category 1 base); the high-time Tu-22M3s of the former 444th TBAP (with the shortest remaining service life) will be mothballed at Vozdvizhenka, while the low-time *Backfire-Cs* will be redeployed to Belaya. Category 3 air bases are airfields which can be used for military purposes in case of need.

During 2009 some regiments and squadrons were already being merged into air bases and redeployed to new locations; however, the process is still far from completed, therefore this book gives an approximate DA order of battle as at the Autumn of 2009.

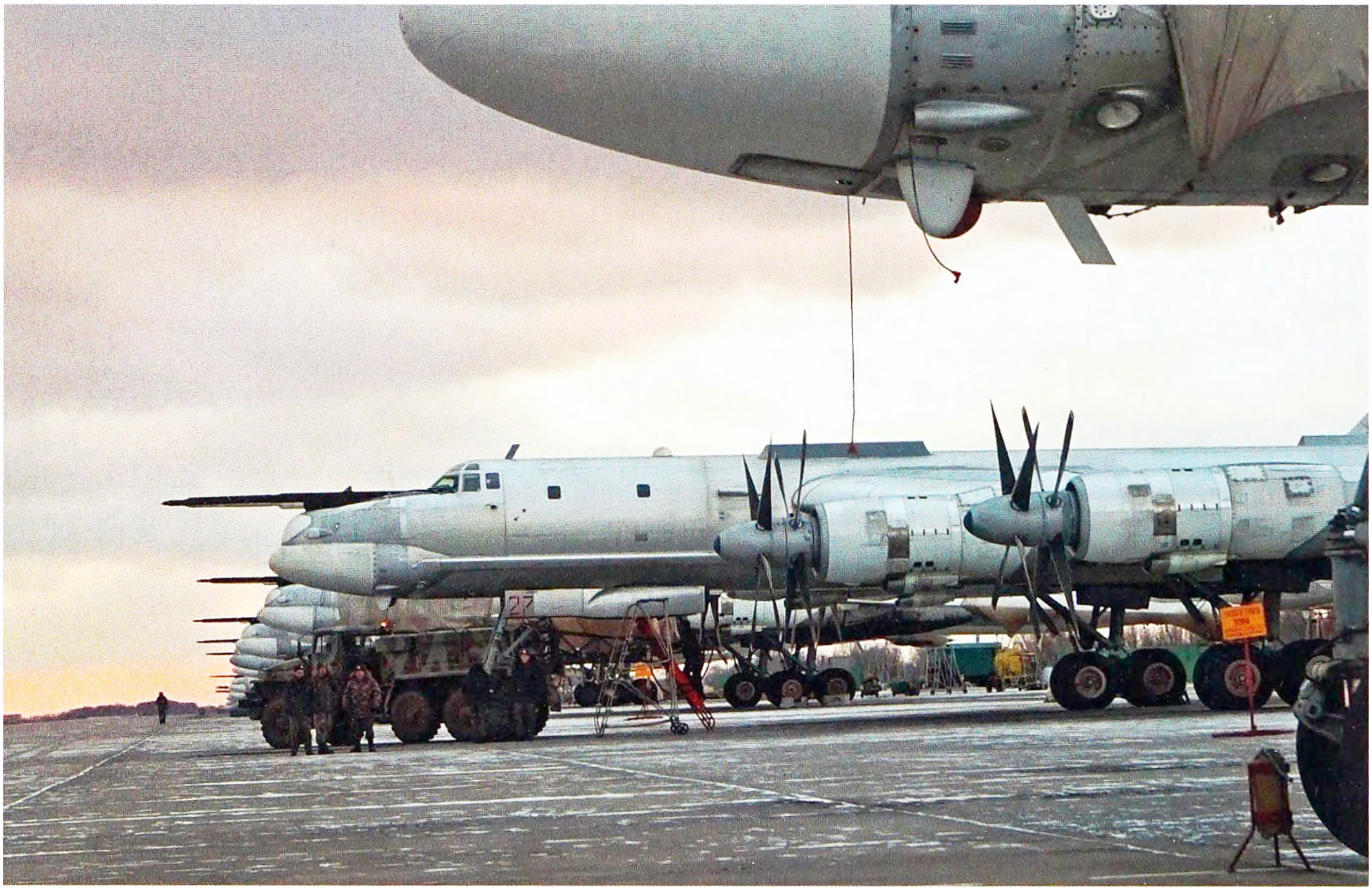
As for the Long-Range Aviation's hardware, no major changes are expected in the near future. Three basic types of bombers/missile carriers (Tu-160, Tu-95MS and Tu-22M3) and one type of refuelling tanker (IL-78/IL-78M) are on strength, as are a number of assorted aircraft and helicopters for performing special



The Long-Range Aviation flag.

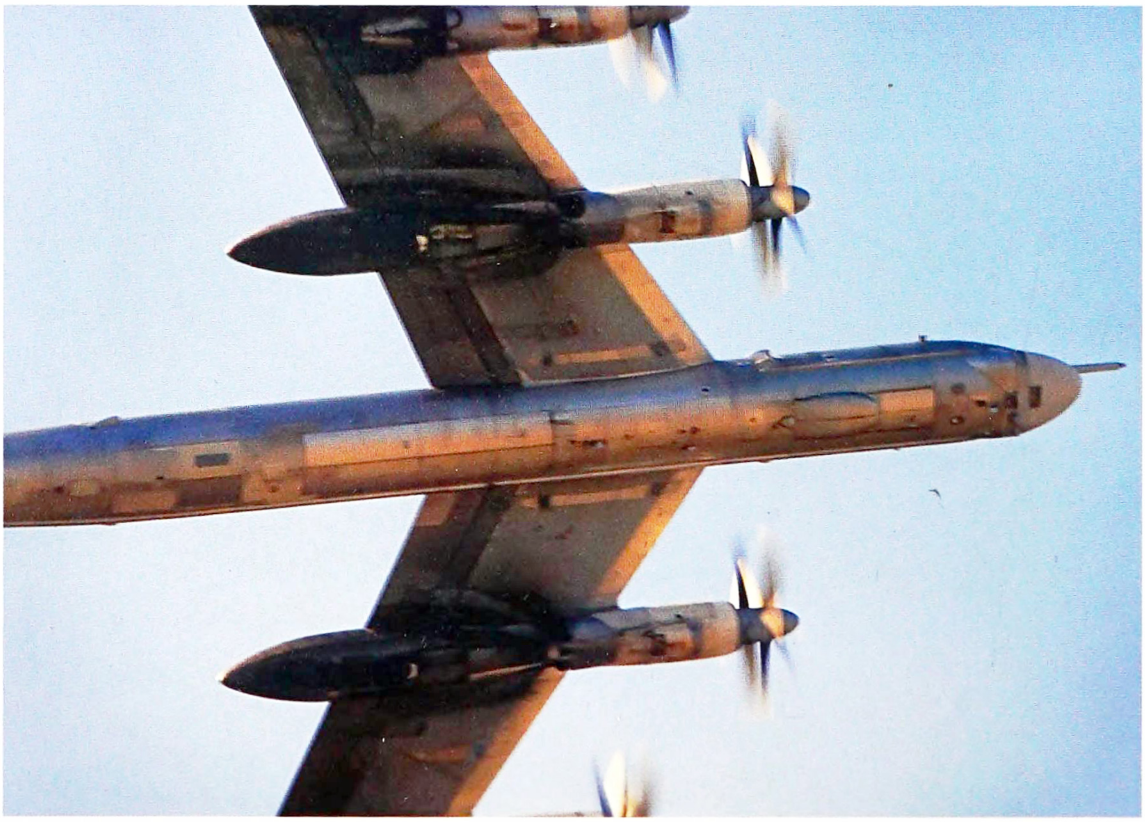


A Tu-95MS is refuelled by an IL-78M.



The flight line at Engels-2 AB, with the 184th TBAP's Tu-95MSs being readied for the day's flying.

missions, aircrew training and transport duties (Antonov An-30 *Clank*, An-12 *Cub*, An-26 *Curl*, Tu-134UBL, Mil' Mi-8 *Hip*). The enhancement of the *Blackjack*'s, *Bear-H*'s and *Backfire-C*'s combat capabilities will occur by modernising both the aircraft themselves and their weapons. Development work is in progress on a Future Long-Range Aviation Aircraft System (PAK-DA



The underside of this *Bear-H* shows clearly where the four missile pylons had been installed when the aircraft was a Tu-95MS-16. The pylons may make a comeback yet in the course of an upgrade!

Opposite, top: The IL-78 tankers are a vital component of the DA. The 203rd GvOAPSZ flight line at Dyagilevo AB is shown here.

Opposite, bottom: How a Tu-95MS is seen by the IL-78's refuelling systems operator.

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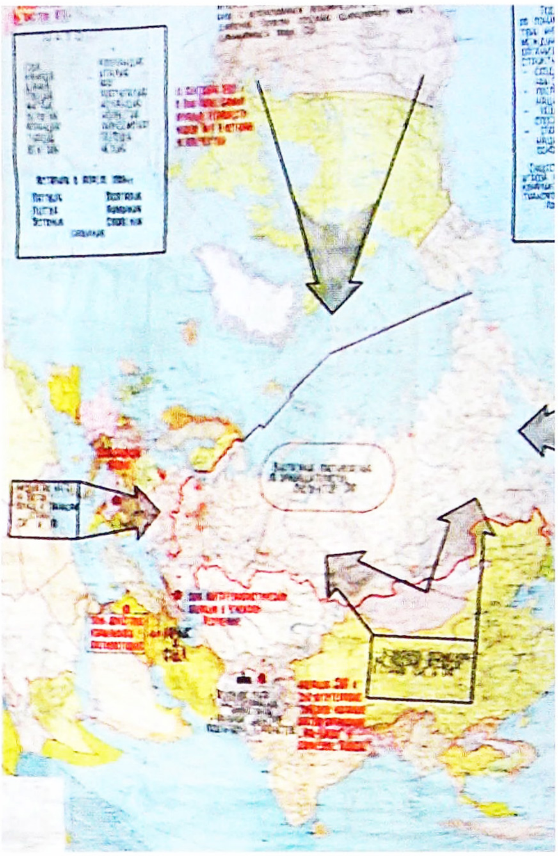


This map dating back to the 1990s shows the anticipated directions from which NATO would attack Russia. The DA's role then would be to deliver a retaliatory strike.

– *Perspek**tiv**nyy aviatsi**on**nyy **kom**pleks **dahl'**ney avi**ah**tsii*). The main scope of work on this programme is conducted by the Tupolev Joint Stock Co.

In furtherance of the traditions begun in the Soviet Air Force, some strategic aircraft have received proper names. The Tu-160s are named after Heroes of the Soviet Union who served in the DA and other people directly associated with the Long-Range Aviation, while some Tu-95MSs are named after Russian cities associated with the DA.

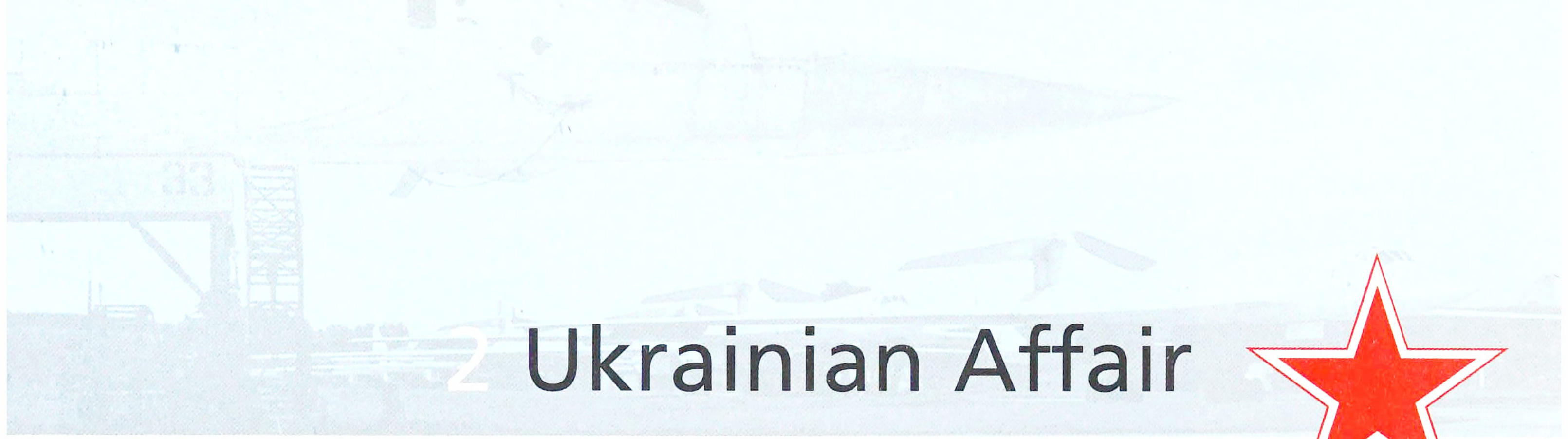
On 19th September 2009 Maj.-Gen. Anatoliy D. Zhikharev was appointed the Russian Air Force's new DA Commander by a decree of the President of the Russian Federation Dmitriy A. Medvedev. The Deputy Commander-in-Chief of the Air Force Maj.-Gen. Viktor Bondarev handed over the DA standard to Anatoliy Zhikharev and introduced him to the DA headquarters staff. The former DA Commander Maj.-Gen. Pavel V. Androsov retired on reaching the active service age limit.

Anatoliy D. Zhikharev was born on 5th July 1956 in the village of Protopopovka, Khar'kov Region. In 1978 he graduated from the Tambov Military Pilot College; in 1988 he graduated from the Air Force Academy named after Yuriy A. Gagarin. In the Long-Range Aviation he served consecutively as bomber co-pilot, aircraft captain, deputy squadron commander, squadron commander, deputy regiment CO, deputy division CO, Deputy Commander of the 37th VA and finally the First Deputy Commander of the 37th VA. Zhikharev has mastered eight aircraft types and logged more than 3,000 hours' total flight time. In 2005 he flew the Tu-160 in which the then President of Russia Vladimir Putin made a five-hour flight. Anatoliy Zhikharev is one of the most skilled pilots in the Russian Air Force.

In 2009 the C-in-C of the Russian Air Force declared that the DA is still the Air Force's main striking power, the aviation component of Russia' nuclear triad and a strategic reserve of the Supreme High Command. The main objective of the current Russian military-technical policy regarding the DA is to maintain its potential at a level providing a strategic and regional nuclear and non-nuclear deterrent.

Below: Russian Air Force Tu-95MSs, such as '11 Red' depicted here, are due for an upgrade that will allow them to carry new missile types.

Opposite page: Two of the Ukrainian Tu-160s at Priluki, with the flight line in the background.



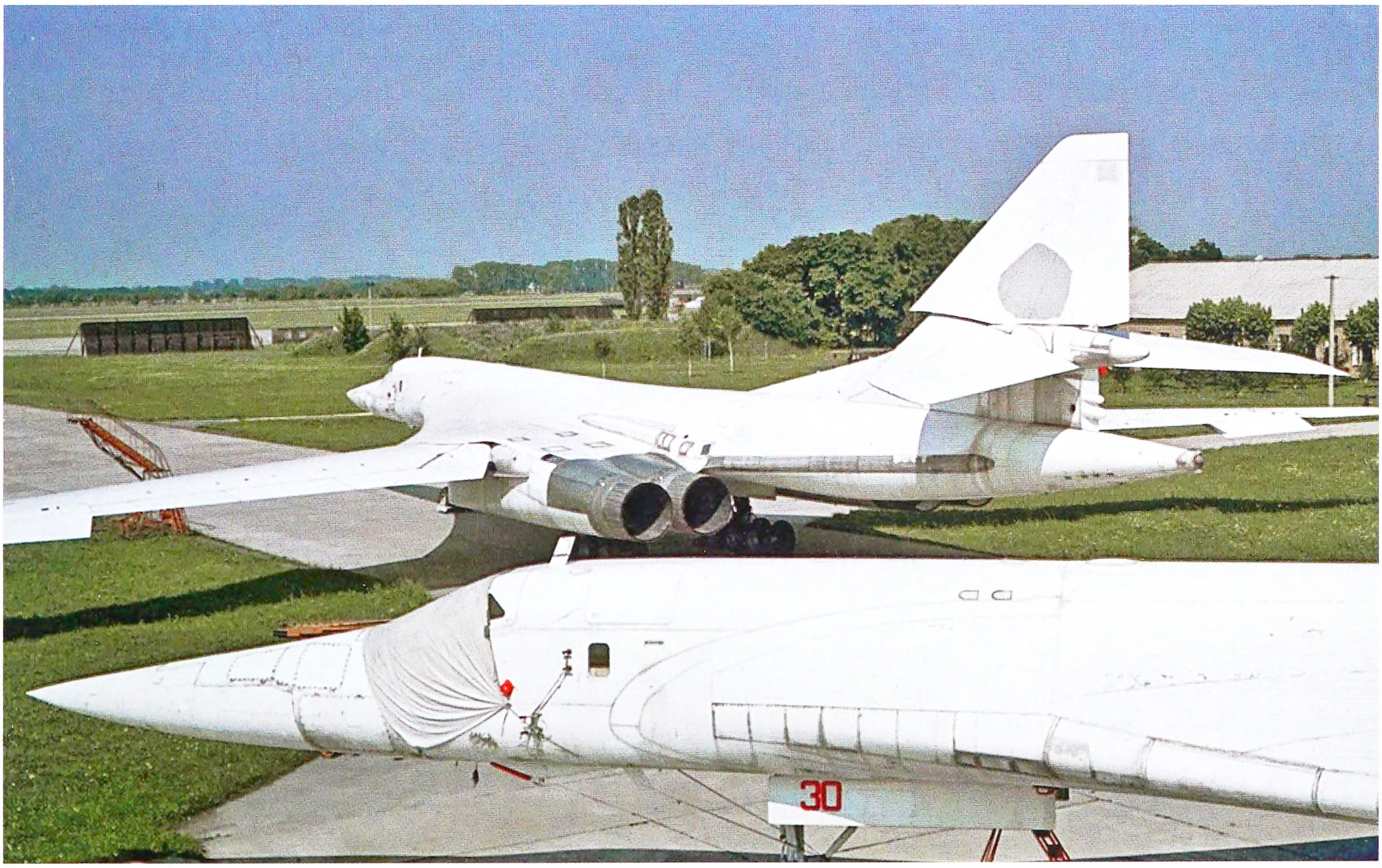
2

Ukrainian Affair

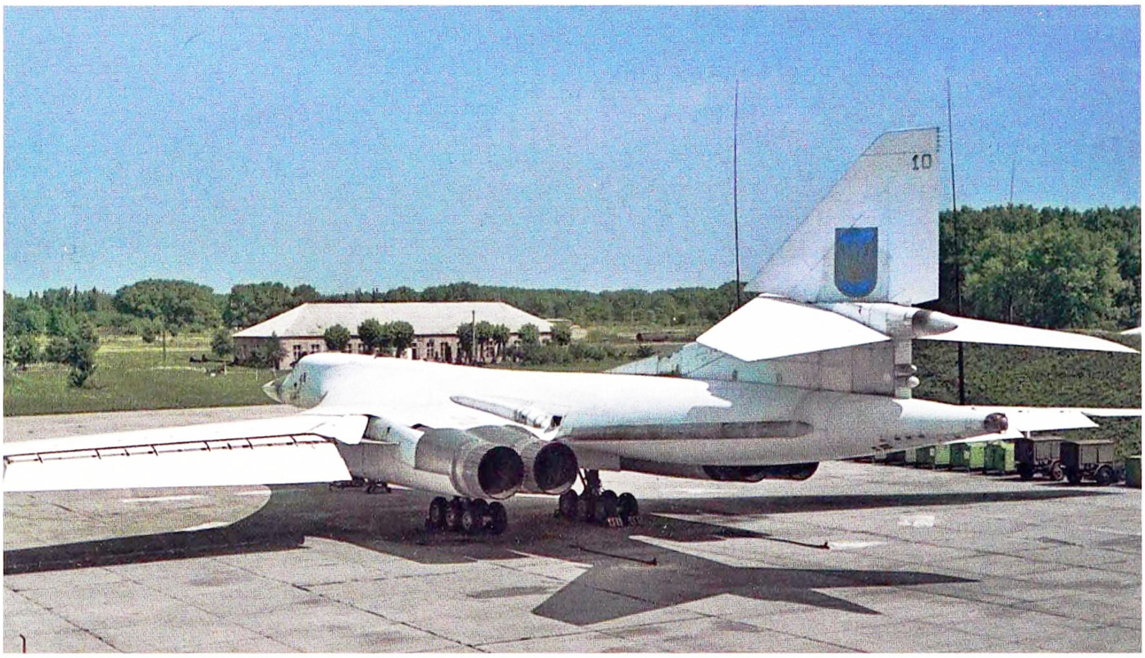
After the break-up of the Soviet Union part of the Long-Range Aviation's assets remained on the territory of the newly independent Ukraine: 19 Tu-160 strategic missile carriers and 24 Tu-95MS strategic missile carriers (operated by the regiments in Priluki and Uzin respectively), 46 Tu-22M3 long-range bombers (two regiments in Poltava and Stryy) and IL-78 tankers (a further regiment in Uzin).

The point is that when it came to dividing the property of the former Soviet Union between the CIS republics, it became clear that it was utterly impossible to assess the contribution of each republic to the creation of the Soviet industrial and military power. Therefore all members of the Commonwealth agreed that each of the new states would manage whatever assets were on its territory. Priluki (Chernigov Region) was home to the most advanced Soviet strategic bombers of the day – the Tu-160s. At first the Ukraine even took pride in being able to afford strategic aircraft. However, it soon became clear that the bombers were in reality a white elephant. For a maximum-range mission each aircraft required 170 tons (374,780 lb) of kerosene, and for a training flight over home ground 40 tons (88,180 lb) of fuel were needed. According to the Ukrainian Air Force command, the maintenance costs of the strategic bomber fleet amounted to US$ 1.4 million per year; hence the Ukraine became more and more in favour of scrapping the inheritance, and in any event, Ukrainian airspace was too small for Tu-160 operations. Due to the constant shortage of fuel the *Blackjacks* flew no more than five times a year; most often the bombers sat idle on the hardstands at Priluki. Most of them were devoid of markings, the Soviet red stars having been painted out; a few sported the Ukrainian yellow/blue roundels and shield-and-trident tail insignia. Occasionally a single aircraft took off to participate in an air parade.

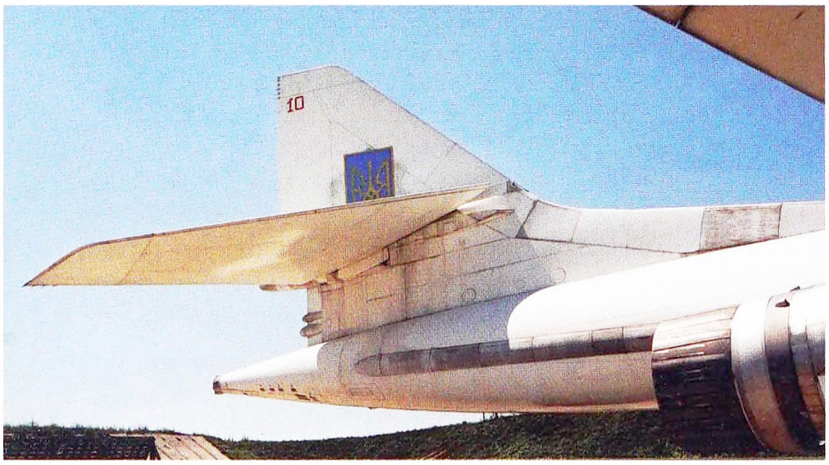
Vadim Antakov, one of officers of the 1006th TBAP based in Uzin, recalls: *'On 1st January 1992 the strategic missile carrier regiment took the oath of allegiance to the*



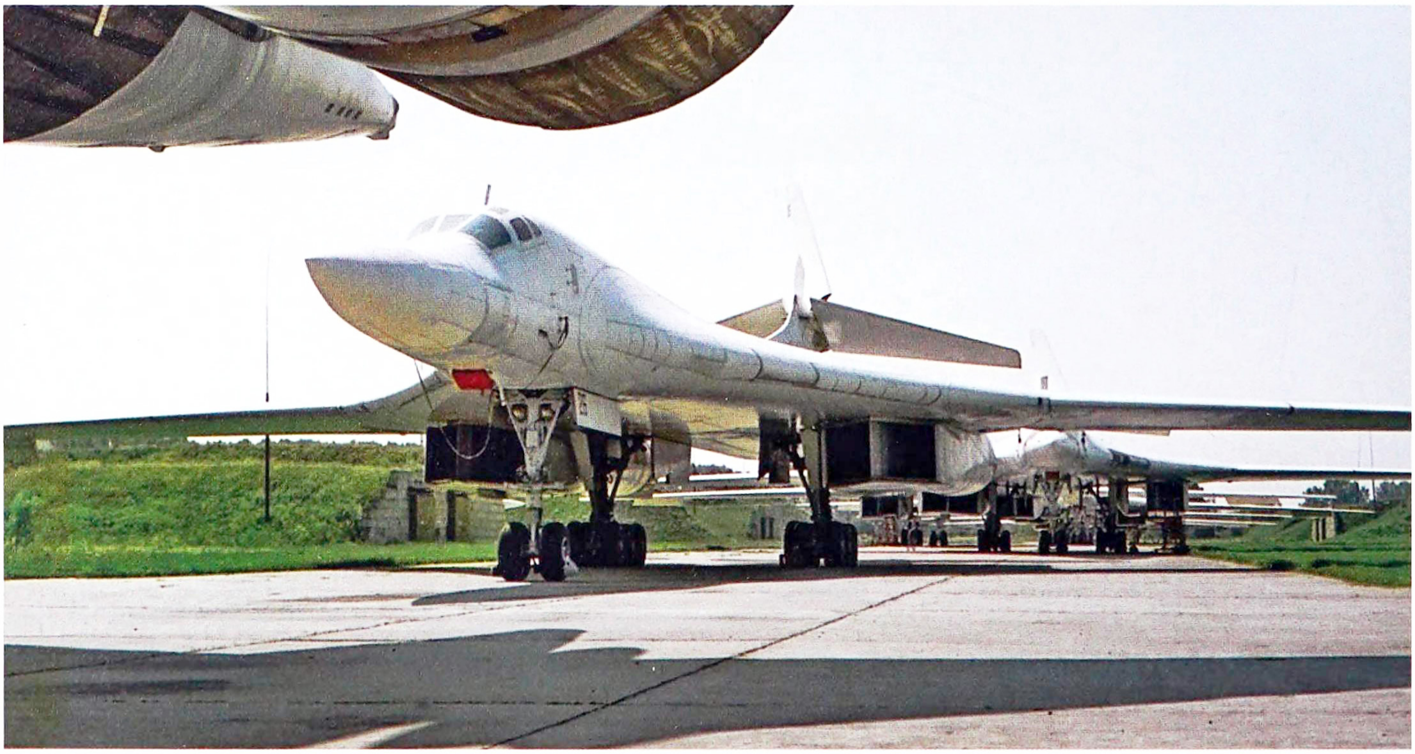
Right and below: '10 Red' was one of the few Tu-160s to gain full Ukrainian Air Force insignia.

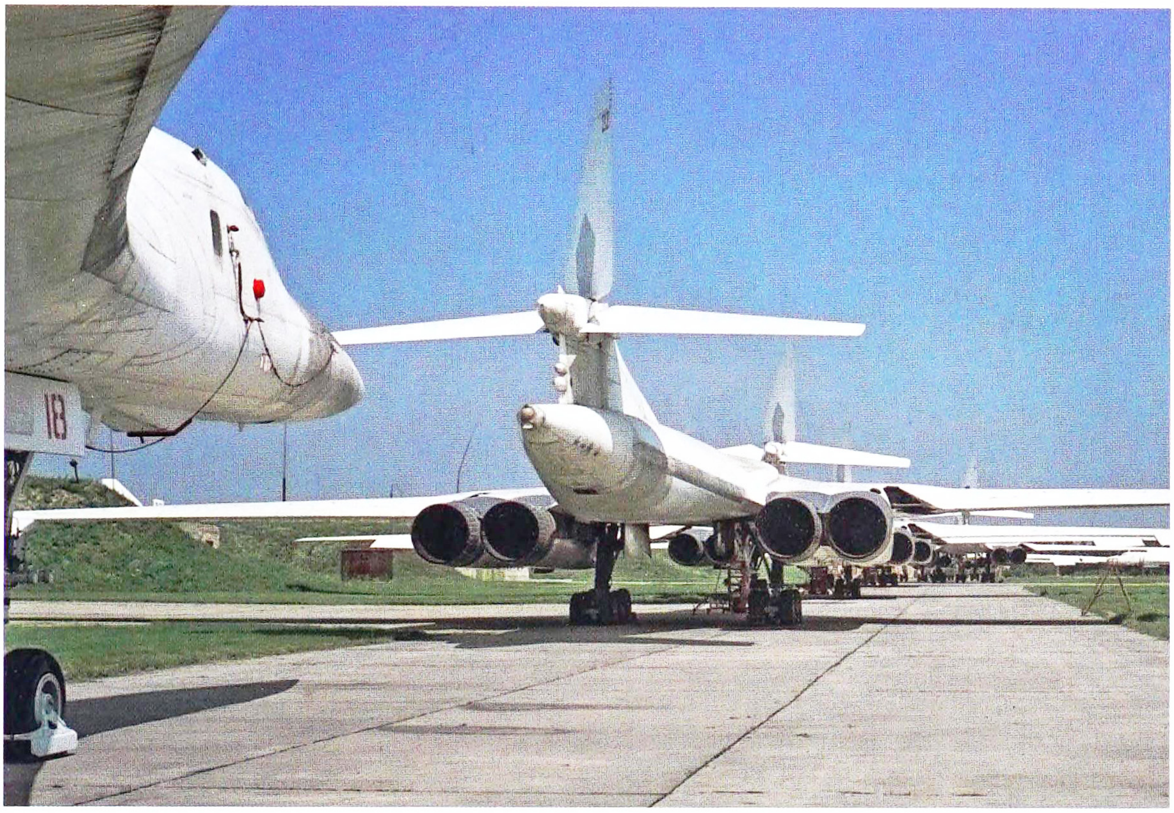


The taxiway of the dispersal area at Priluki packed with unwanted Tu-160s.



Ukraine. On 13th February, after lunch, we (the personnel – Auth.) were told to fall in before the officers' club, in the middle of a blizzard… I remember asking the regiment's Chief Political Officer if those who were not going to swear allegiance were required to come as well. He told me yes, and not just that, but those who were in charge needed to make sure that 100% of their personnel were present in full parade dress! Well, I ignored the "parade dress" bit and came wearing my fatigues; there we were – the ones who had refused to take the oath – at the back of the ranks… The documentary registration of this





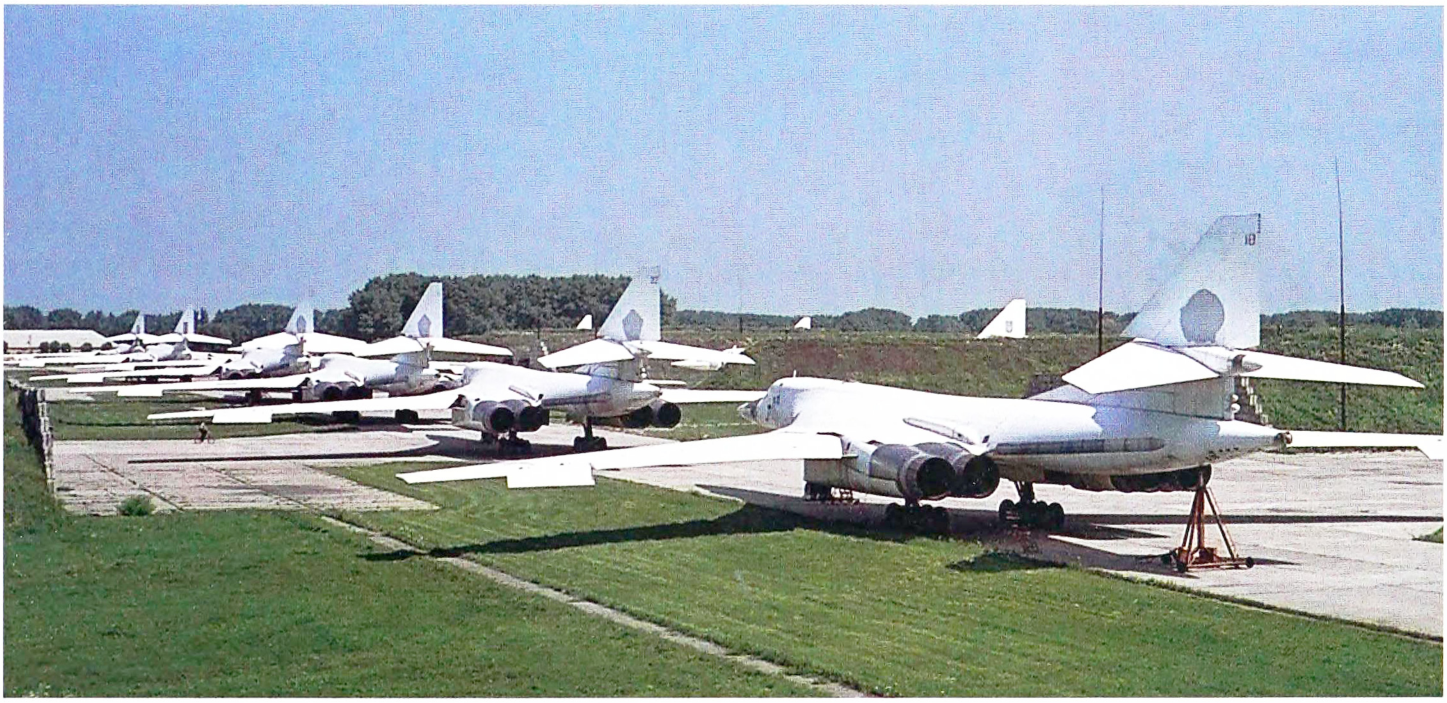
Another view of the so-called 'reservation' at Priluki. Some of the revetments contain further *Blackjacks*.

oath began next – it was necessary to sign some papers at the HQ... Everyone tried to persuade me to take the oath until I got fed up and asked them to leave me alone because I was not going to do it, no way. Our service took an interesting turn from then on: they did pay us our salary, but all we did was sit at work until lunch, ostensibly playing cards and pondering how to live and what to do next... Every Monday they gave us until Thursday to quit and get transferred somewhere else. When we asked where and how we were supposed to go, they told us plainly that "you have eaten enough of our suet"... (Suet has been a favourite dainty of the Ukrainians for ages and thus is the subject of countless jokes about the Ukrainians – *Auth.*)

The long and short of it is that eventually we [...] moved to Engels to continue our service... The ordinary people [in Uzin] saw off us with tears in their eyes and and with songs...'

The strategic bombers absolutely did not fit into the Ukrainian defensive doctrine, since the Ukraine had declared a non-nuclear status.

Most of the Tu-160s at Priluki had the insignia crudely painted out. Note the support beneath the tail of the nearest aircraft ('18 Red').



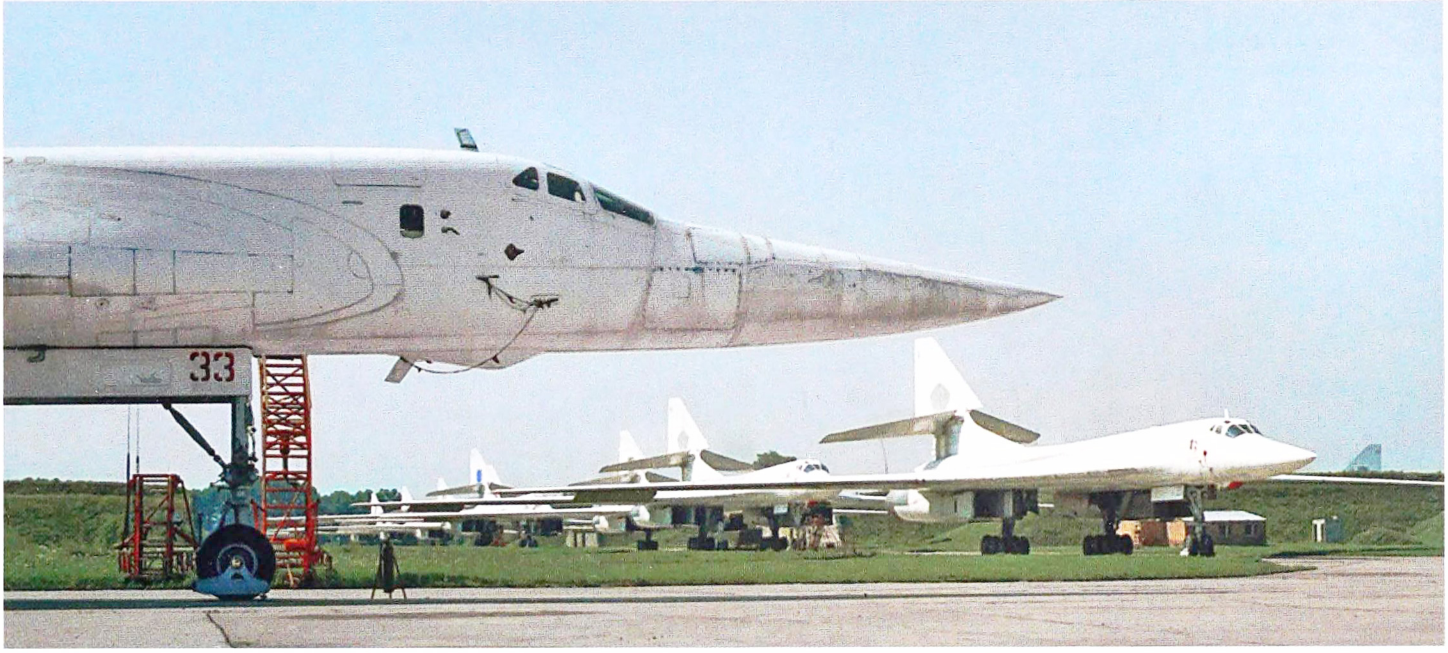
Two Ukrainian *Blackjacks* sit forlorn on a snow-covered hardstand, awaiting a decision on their fate.

Another stored UAF Tu-160. The *Blackjacks* at Priluki were reasonably well looked after.

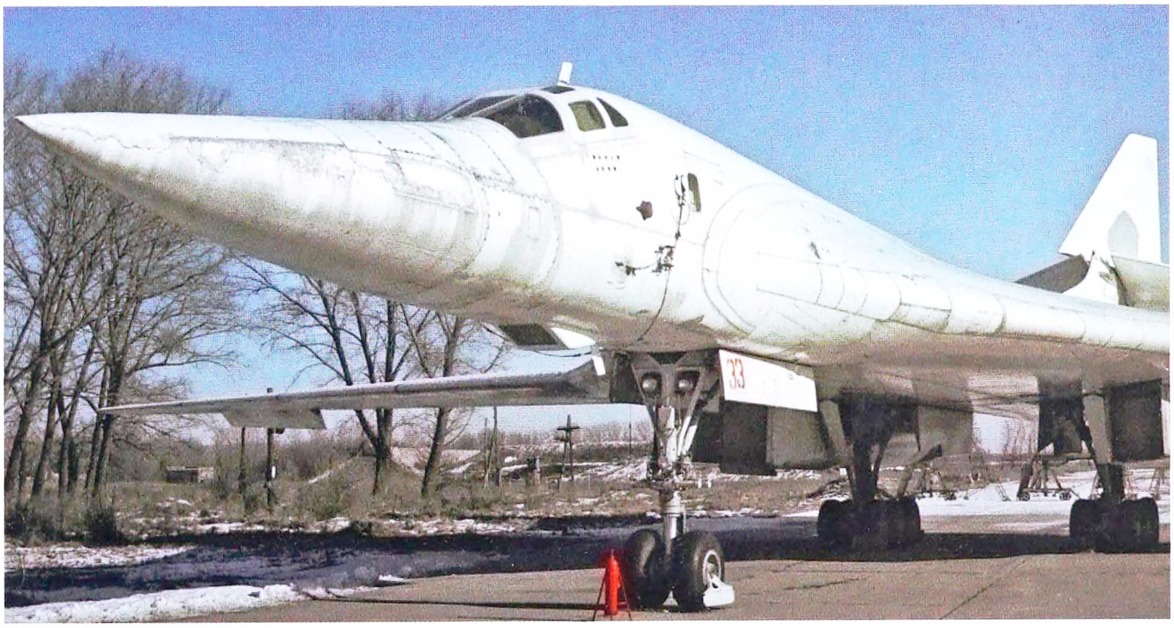
Even keeping them in storage was both too expensive and pointless. Therefore soon enough Kiev began to reflect on how to get rid of the Tu-160s. There wasn't much of a choice: the bombers could be either transferred to Russia (following the example of Kazakhstan, which had exchanged its unwanted Tu-95MS bombers for fighters and attack aircraft) or scrapped.

The first round of negotiations about the fate of the strategic aircraft and air-launched cruise missiles remaining in the Ukraine began

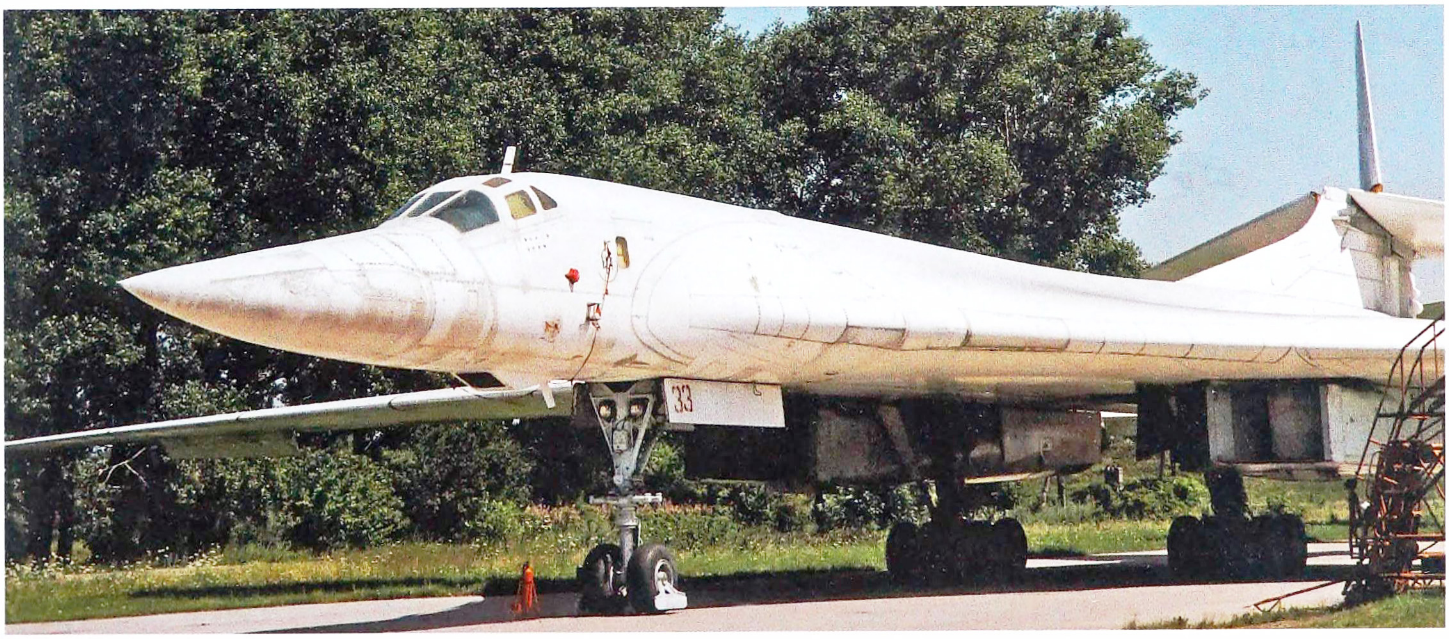
Tu-160 '10 Red' parked in front of a blast shield. It was one of the examples transferred to Russia.

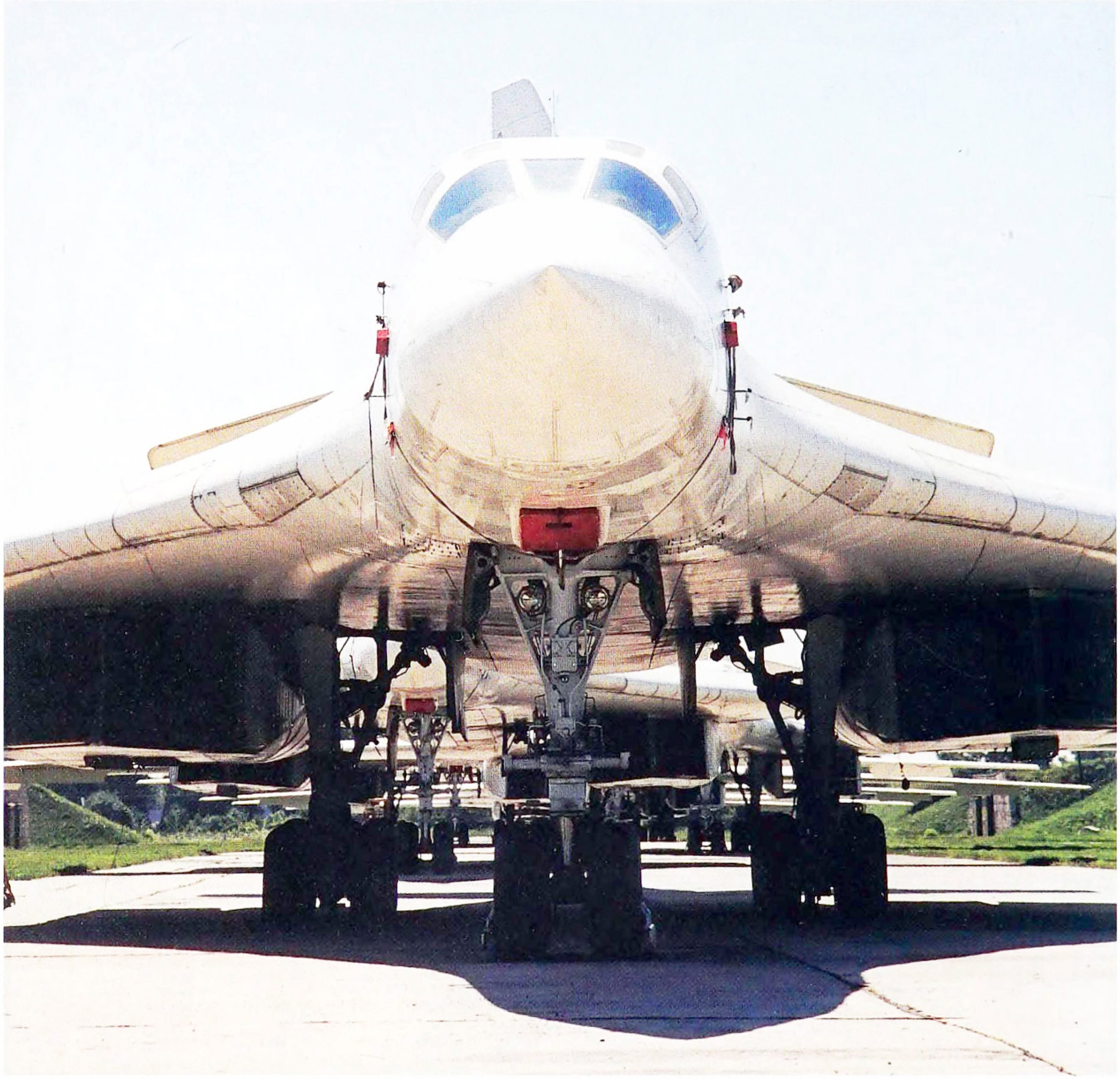


At least ten Tu-160s are visible in this view of the 'reservation'.

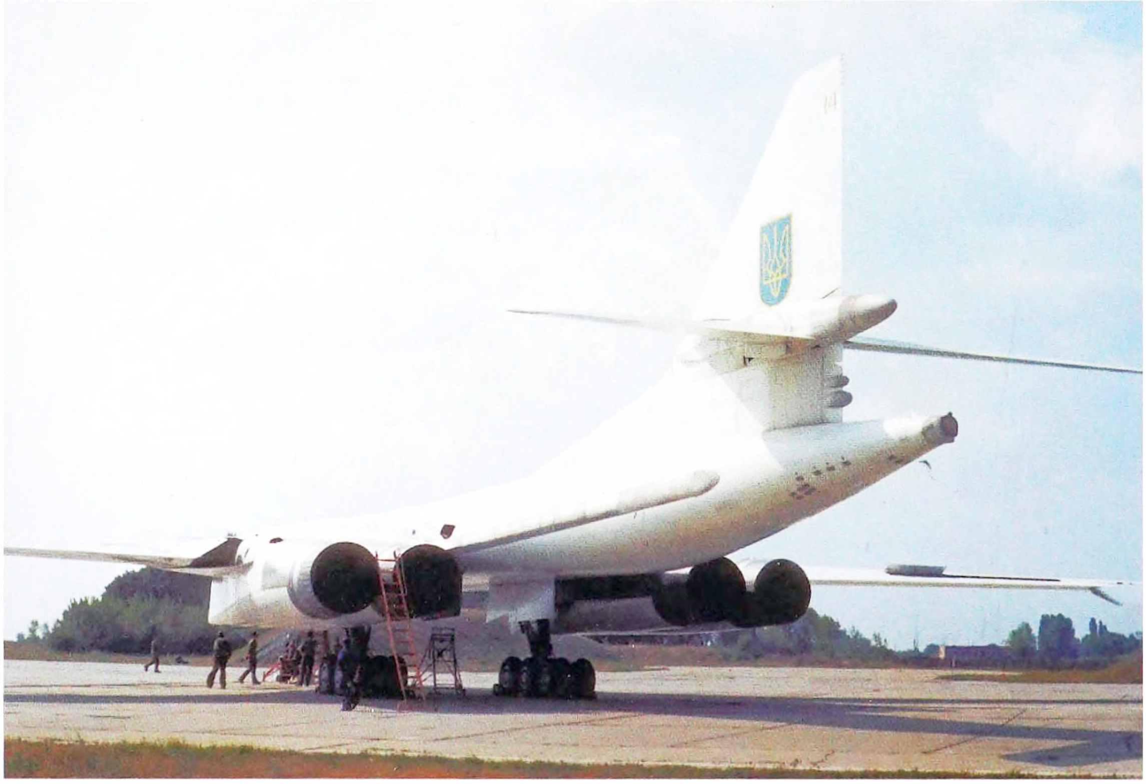


Two more views of '33 Red' in different seasons; note the different rudder positions and the nine mission markers on the nose.





The Tu-160s were parked at Priluki in chequerboard order, not being aligned with the axis of the taxiway.

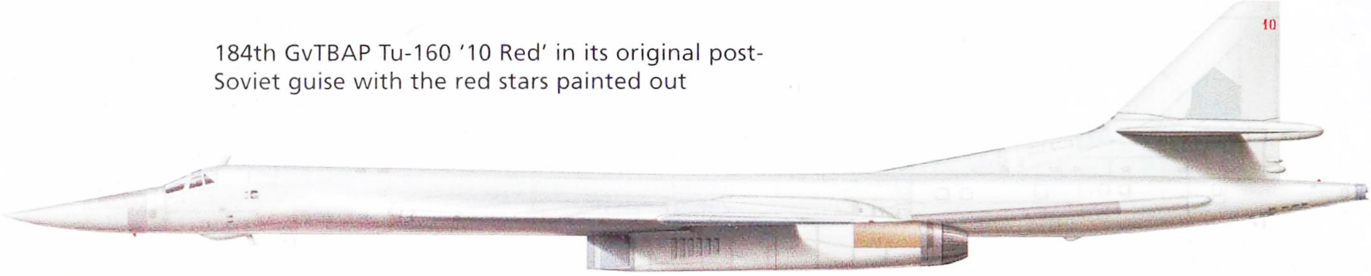


Pristine-looking '14 Red' was another *Blackjack* in full UAF markings with the shield-and-trident tail insignia.

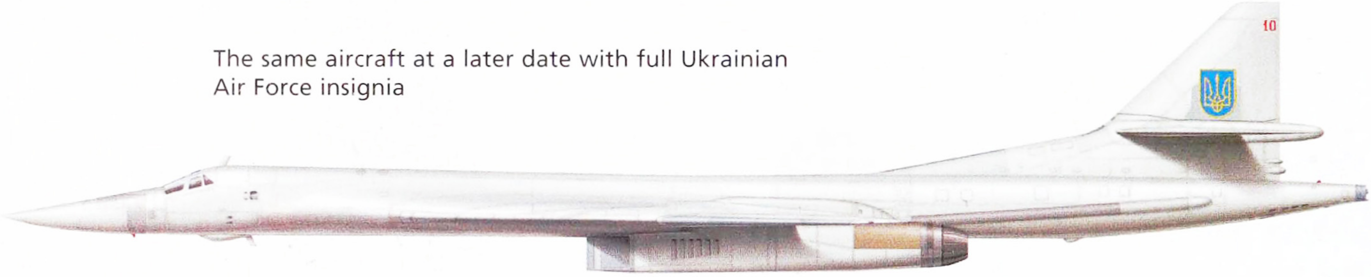
Here, '14 Red' is seen sharing the flight line at Poltava with visiting USAF bombers (a B-52H and a B-1B) in late September 1994 to mark the 50th anniversary of the USAF shuttle raids over Germany.

in 1993. As these failed to yield any results, negotiations on the purchase by Russia of ten fully serviceable Ukrainian Tu-160s at a price of US$ 25 million apiece continued in 1995. While Russia needed these aircraft badly, as the Air Force had only six Tu-160s at Engels, the prospect of Russia strengthening its strategic aviation absolutely did not suit Russia's arch-opponent, the USA, which would much rather see the bombers destroyed than let the Russians lay hands on them. Hence the USA started putting pressure upon the Ukraine, riding hard upon the anti-Russian sentiment that existed in certain Ukrainian circles. The first

A rare picture of a Ukrainian Tu-160 in flight, showing the UAF roundels on the wings.



184th GvTBAP Tu-160 '10 Red' in its original post-Soviet guise with the red stars painted out



The same aircraft at a later date with full Ukrainian Air Force insignia

round of negotiations came to nothing: the price offered by Russia was dismissed as ridiculous by Kiev, which demanded US$ 75 million for each aircraft. After the first negotiations the Ukraine's National Security and Defence Council took the decision to liquidate the Tu-95MS and Tu-160 strategic aviation/missile systems, the USA financing the process. The US Congress officially allocated funds – US$ 13 million for starters – for the liquidation of the strategic and long-range bombers remaining on Ukrainian soil; appropriate contracts were signed with specialised contractors. After the completion of the scrapping operations the Ukraine would have the right to sell the scrap metal.

In 1998 Ukraine started the destruction of strategic bombers; the carnage was funded by the USA under the Co-operative Threat Reduction Program prepared by Senators Sam Nunn and Richard Lugar. On 16th November, in the presence of Senators Richard Lugar and Charles Levin, the first victim – a Ukrainian Air Force Tu-160 coded '24 Red' – was ceremonially broken up. This aircraft was built in 1998 and had logged 466 hours total time since

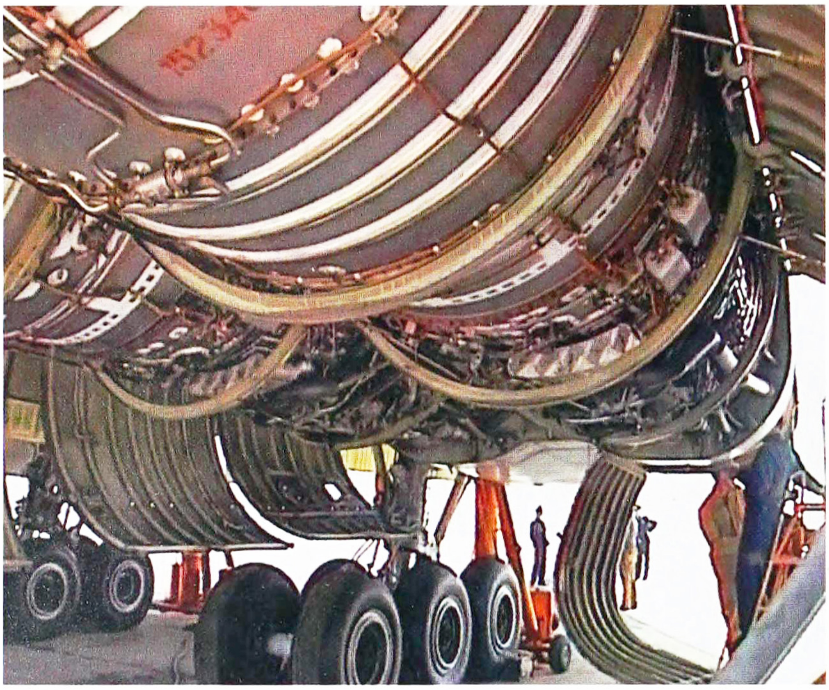
Visitors swarm around '10 Red' during an 'open house' at Priluki.

Opposite page, top: The nose of Tu-160 '24 Red', the first example to be scrapped, and another view of '33 Red'.

Opposite page, bottom: Tu-160 '10 Red' in its initial post-Soviet guise without insignia.

new (TTSN), which is next to nothing for a strategic bomber. The second aircraft to be destroyed, Tu-160 '14 Red', had taken part in the celebrations in Poltava in late September 1994 marking the 50th anniversary of the American shuttle raids (bombing raids over Germany with a staging point in Poltava); it was built in 1991 and had logged less than 100 hours TTSN. Its scrapping was completed in November 1999. The American experts worked in Priluki day and night. The destruction of each aircraft cost a bundle.

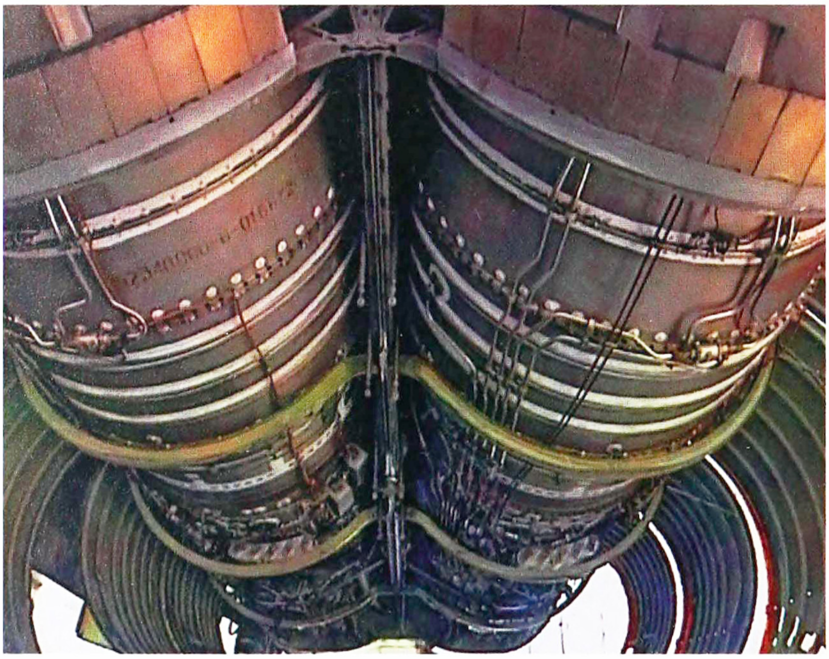
Here is another excerpt from Vadim Antakov's memoirs. *'The Americans had supplied all of the equipment free of charge, although word was around that they would take the equipment back after the scrapping had been completed. However, when I was there, there was no end in sight to the work. What I saw was the actual guillotine for severing the rear fuselages almost immediately aft of the wings, hydraulic scissors for cutting up smaller pieces of the airframe, such as wings; then there was a special vehicle like a fire engine – it made an unforgettable sight and sound, especially at night, – and a compactor pressing the metal into cubes measuring about 1x1 m [3x3 ft]. Besides, the personnel working the equipment had been trained in America, the USA accepting the training costs. The scrap area was big enough to accommodate three or four Tu-95s, or four or five Tu-22s/Tu-22Ms. They were lined up put along*



Russian tech staff at work on a Ukrainian Tu-160 to be transferred to Russia. The aircraft is jacked up.

a fence running along the perimeter road and the tails were chopped off, whereupon the actual dismantling began…'

On 5th December 1998 the Ukrainian Ministry of Defence and the US Department of Defense signed an agreement on the destruction of 44 Ukrainian heavy bombers and 1,068 Kh-55 air-launched cruise missiles (19 Tu-160s were to be destroyed in compliance with the START-2 international treaty). Under a supplementary agreement the deal was amended: 16 *Blackjacks* would be scrapped, and three would be spared from the guillotine and modified for use as the first stage (launch vehicle) of a suborbital launch space system.



The starboard NK-32 engines of the same aircraft uncowled for inspection.

Opposite page: '18 Red', one of the eight Tu-160s transferred.

In March 1999 the Ukrainian Ministry of Defence was authorised by the government to sell the three Tu-160 bombers and spares for them for as little as US$ 20 million (!) to the American company Platforms International Corp., which was to convert the bombers into carriers of space launch vehicles (SLVs) for placing satellites into low-Earth orbit. The organisation of satellite launches by means of Pegasus suborbital-launch SLVs was assigned to the American company Orbital Network Services Corporation. The Russians, however, blew the whistle, pointing out to the Ukrainian and US governments that the deal would be in contravention of the START-2 treaty. Understandably enough, Russia would do everything to stop its most modern bomber from falling into American hands. Somewhat surprisingly, Russia's uncompromising position found support in Washington, which also spoke up against any infringement of the treaty's basic stipulations by the Ukraine; therefore Kiev had to abandon the plan.

In April-May 1999 Russia and the Ukraine discussed the possibility of exchanging eight Ukrainian Tu-160s and three Tu-95MSs for Antonov An-22 Antey (*Cock*) and An-124 Ruslan (*Condor*) transports from Russian Military Airlift Aviation stocks. The Ukrainian party was in a hurry to strike a deal on favourable terms, as under the terms of the START-2 treaty not a single strategic bomber should remain in the Ukraine by 4th December 2001. The USA attempted to throw a spanner in the works, trying by all means to prevent a bolstering of Russia's strategic power weakened by the disintegration of the USSR, and insistently urged the Ukraine to scrap the strategic bombers, promising to finance the disposal.

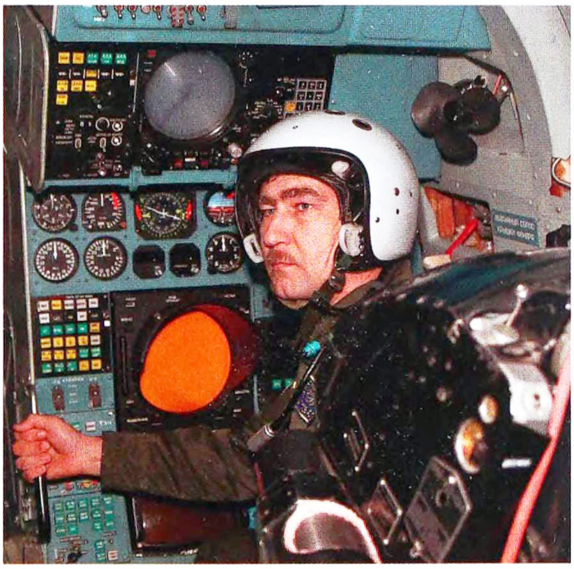
Nevertheless, the American plans were foiled. In early August 1999 an agreement was reached on the transfer of eight fully serviceable Tu-160s, three Tu-95MSs and 575 Kh-55, Kh-55SM and Kh-22NA cruise missiles (the latter type was carried by the Tu-22M3) from the Ukraine to Russia as partial repayment of Ukrainian debts for natural gas deliveries. The Ukraine lacked the money to settle the debt; therefore such a decision was accepted.

Russian Air Force Maj.-Gen. Pyotr D. Kazazayev, one of the main participants of the negotiations with Ukraine, recalls:

'In August 1999 I was at the LII airfield in Zhukovsky where the MAKS airshow was taking place. All of a sudden, I received orders to go to Moscow double quick and attend a

meeting with Vice Prime Minister of Russia Il'ya I. Klebanov. On arrival at the 'White House' (the Russian Parliament building in Moscow – *Auth.*) *I noticed that my assistant S. I. Adamenko was there to meet me. He reported that he, too, had been summoned to the government and had even brought a list of the documents concerning the Tu-160 and Tu-95MS remaining on Ukrainian territory.*

Let me point out at once that prior to that groups of Long-Range Aviation experts had visited the Ukrainian bases (Priluki and Uzin) three times (in 1994, 1995 and 1996) for the purpose of assessing the technical condition of the Tu-160 and Tu-95MS aircraft. One of the groups had been headed by my assistant, Col. V. F. Bondar'; I personally headed the other two. The results of the estimation led to the conclusion that the issues of maintenance of the said aircraft were, putting it mildly, neglected as the personnel was being reduced and, eventually, there were only small storage units remaining in the Ukraine which were unable to perform the scope of maintenance work prescribed by the operating manuals.



Maj. Yuriy G. Paltusov in the WSO's seat of a Tu-160.

On arrival in Klebanov's reception room I realised that the meeting would deal with serious matters, as already there were representatives of the Russian Foreign Ministry, the Ministry of Finance, the Ministry of Economics and Trade, the Ministry of Property, the Federal Customs Service, the Federal Border Service (and the Ministry of Defence represented by me). Il'ya I. Klebanov began his speech by saying that, in accordance with a decision of the Government of the Russian Federation, the Ukraine would return eight Tu-160s and three Tu-95MSs to Russia as payment of debts for natural gas deliveries. Il'ya Iosifovich [Klebanov] explained the financial mechanism of the deal in brief and, turning to Lyubov' Kondrat'yevna Kudelina (the then Vice-Minister of Finance of the Russian Federation), said: "Lyuba, have I told it all correctly?"; she gave an affirmative answer. Each of the departments involved was assigned its own task for organising the work, and it was stated that a government directive would be prepared on the creation of an inter-government commission which would work out the legal documents dealing with the issue.

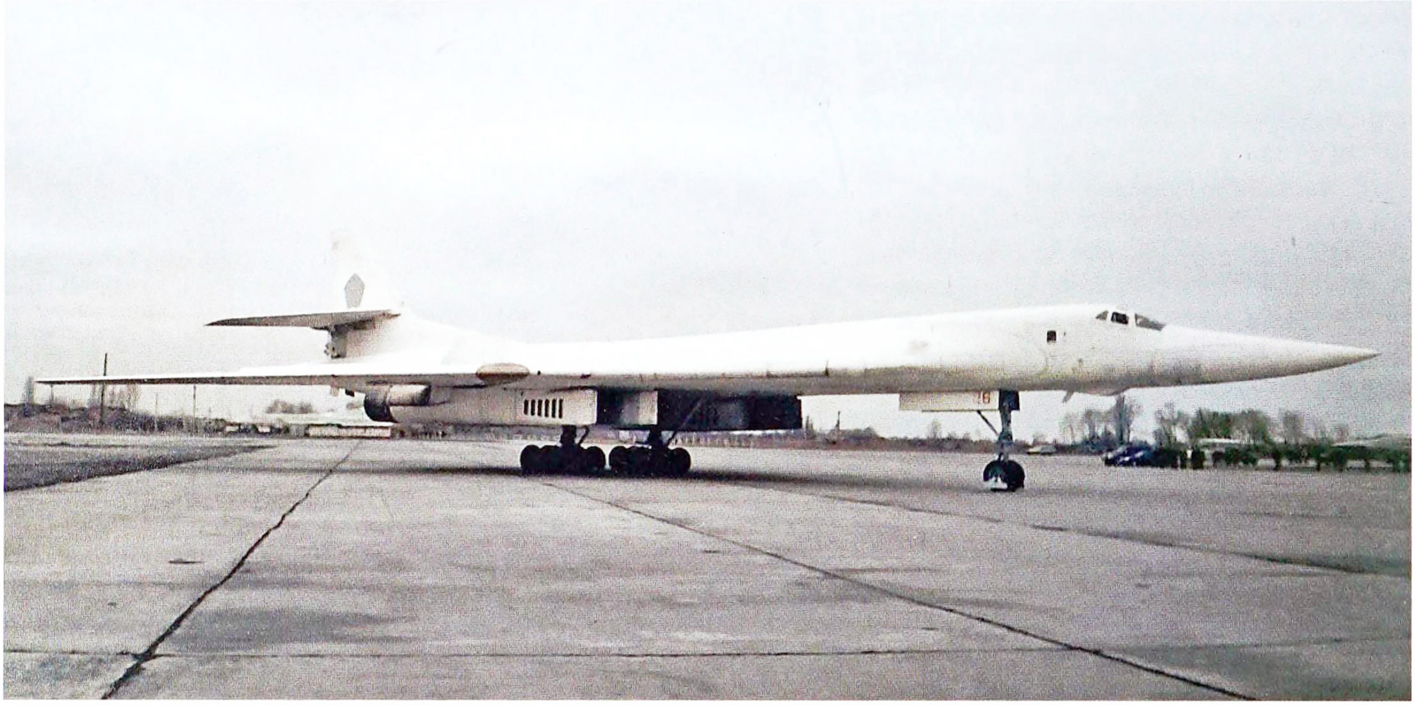
Klebanov asked me about the condition of the aircraft and whether it was possible at all to accept them. I replied that the time was ripe to take them away immediately; another year or two and it would be too late.

The meeting was followed by a discussion of the matter in the government "backstage". I have to say that directly opposite views were voiced. Some said that the decision was correct; others asserted that there was no need to take these aeroplanes. My personal conclusion was that some fairly serious work was required on organising this process, especially in getting the documents approved by the ministries and departments.'

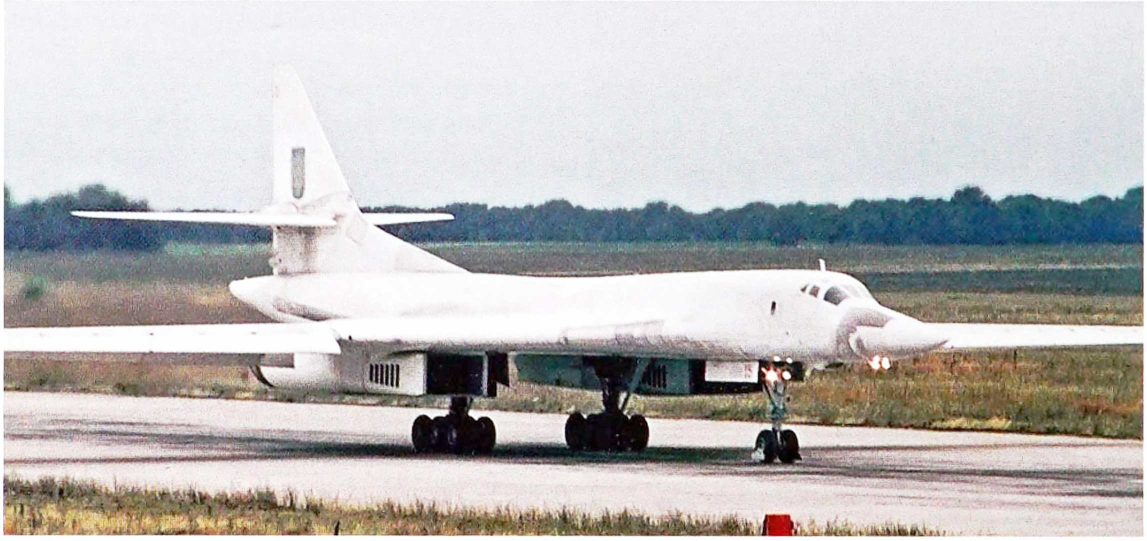
The irritation of the USA caused by the transfer of eight *Blackjacks* and three *Bear-Hs* to Russia passed largely unnoticed for the outside world. However, people who were directly engaged in the negotiations recall that Washington had expressed its displeasure to Kiev at the MoD delegation level in connection with the transfer of the 11 aircraft to Moscow. The formal pretext was that the Raytheon company tasked with the scrapping had been deprived of a part of the planned work (and hence money), but the real reason was that

Col. Aleksey R. Serebryakov, one of the pilots who flew the ex-Ukrainian Tu-160s to Russia.

Lt.-Col. Igor' V. Skitskiy, another Russian pilot involved in the ferrying.

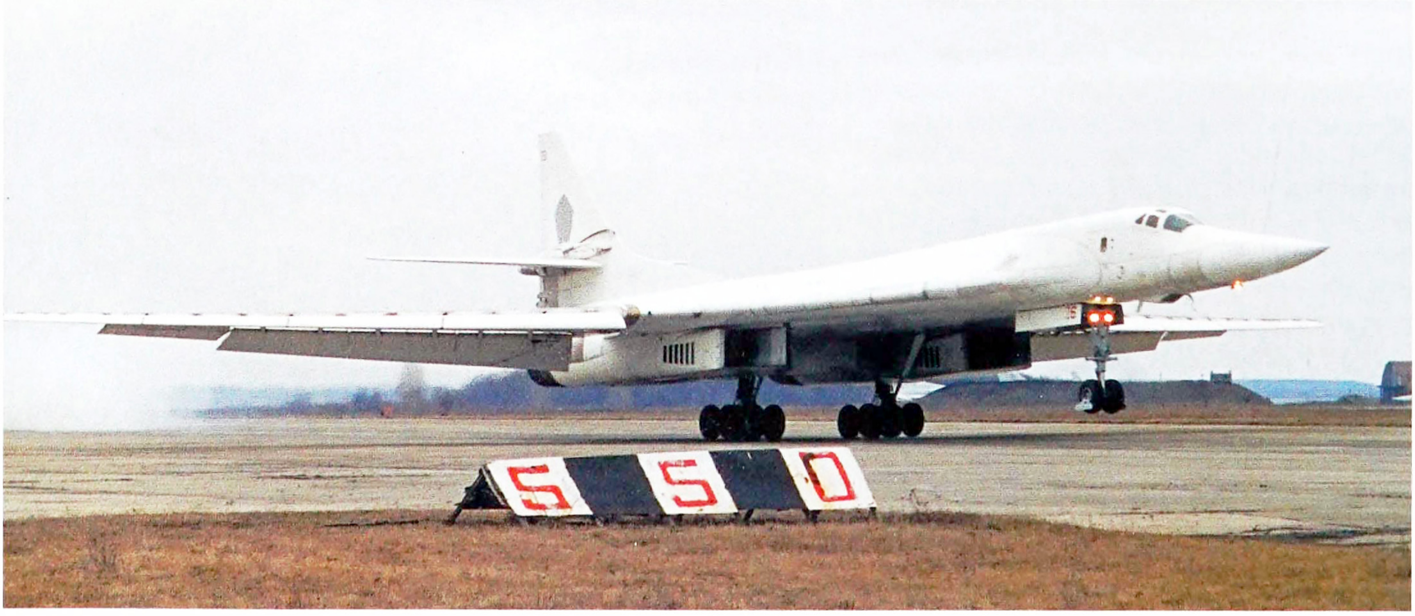


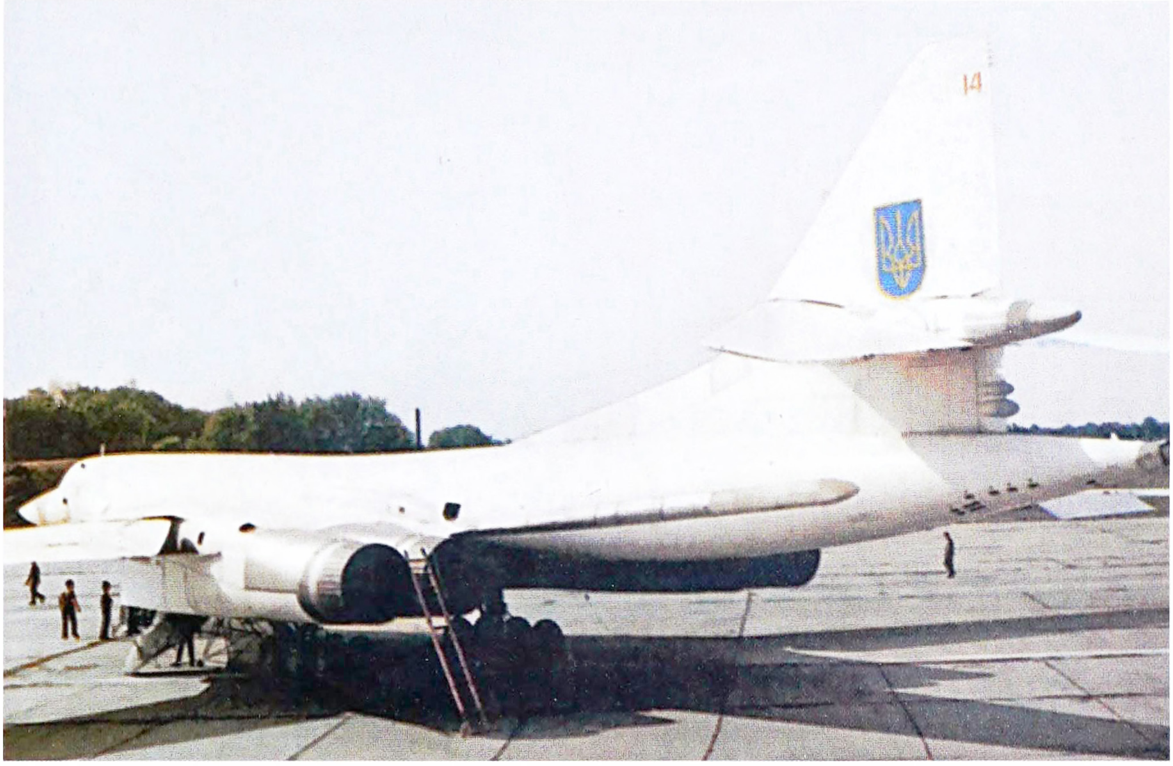
Tu-160 '18 Red' on the flight line at Priluki.



Seen here in its brief active period with the UAF, '15 Red' was also one of the transferred *Blackjacks*.

Tu-160 '26 Red' during one of its rare flights at Priluki.





Sadly, Tu-160 '14 Red' was not transferred to Russia; it was scrapped with less than 100 hours on the clock.

the transfer had given Washington some food for thought. The Russian Air Force was then due to field two brand-new air-launched cruise missile types (the nuclear-tipped Kh-101 and the conventional Kh-102) capable of striking at targets within 5,000 km (3,105 miles) from the launch point with a circular error probable of just a few metres. Together with the strategic bombers available to Russia it would be an appreciable strengthening of the airborne component of the 'former' potential adversary's nuclear triad (and the 'former' bit was open to doubt); the Russian Air Force could strike at targets on the territory of any state without coming within range of its air defences.

Russian (right) and Ukrainian Air Force officers discuss matters associated with the transfer of the bombers.

The first aircraft to be delivered, '10 Red', is seen here while still in service with the 184th GvTBAP.

The Russian flag is hoisted on the first aircraft during the welcoming ceremony.

On 6th September 1999 the then Prime Minister of Russia Vladimir V. Putin signed a directive in Yalta. This document formally approved the draft of the intergovernmental agreement providing for the transfer of eight Tu-160s, three Tu-95MSs and 575 Kh-55, Kh-55SM and Kh-22NA cruise missiles, plus special ground support equipment, from the Ukraine to Russia to offset Ukrainian debts to Russia for natural gas worth US$ 275 million. The same directive ordered the creation of a Russian inter-department work group which would draft the actual agreement between the governments of the Russian Federation and the Ukraine on realisation of the transfer of strategic aviation systems and associated equipment. The First Vice-Minister of Finance of the Russian Federation Aleksey L. Kudrin was appointed head of the group, with First Vice-Minister of Defence N. V. Mikhailov (who also held the post of a permanent secretary) as next in command. In addition, the Ministry of Defence was represented in the work group by the Russian Air Force Commander-in-Chief Army General Anatoliy M. Kornukov and his reviewer Maj.-Gen. Pyotr D. Kazazayev; the latter was then Deputy Commander (Engineering Aviation Service) of the 37th Air Army, but since a certain government official level was required for executing government directives, he was listed as the C-in-C's reviewer. Besides, the structure of work group included representatives from the Foreign Ministry, the Ministry of Taxes and Duties, the Ministry of

State Property, the Ministry of Economics, the Gazprom natural gas company, the Russian Aerospace Agency and the governmental body of the Russian Federation. The group was to draft the agreement between the Russian government and the Ukrainian Cabinet of Ministers, defining the nomenclature, quantity and cost of the strategic aviation complexes and other property to be transferred from Ukraine to Russia and the transfer procedures.

The Ukrainian delegation was headed by Vice-Minister of Economics Vladimir A. Chumakov. The work groups held two sessions, and the joint draft of the agreement was endorsed on 30th September 1999.

On 8th October the Agreement between the government of the Russian Federation and the Ukrainian Cabinet of Ministers on the transfer of the strategic missile carriers, cruise missiles and support equipment was finally signed at a meeting of the government delegations in Yalta. Four days later the then Minister of Defence of Russia Marshal Igor' D. Sergeyev and his Ukrainian counterpart Army General Aleksandr I. Kuz'muk endorsed the schedule for the preparation and transfer of the 11 bombers, missiles and other property. This document became the guideline for the experts of the Russian Long-Range Aviation's engineering service. The aircrews and ground personnel of the 37th (Strategic) Air Army of the Supreme High Command were tasked with formal acceptance and ferrying of the aircraft, Maj.-Gen. Pyotr D. Kazazayev being in charge of the effort.

On 25th October 1999 the government of the Russian Federation signed directive No. 1183 confirming the Agreement signed by the two parties in Yalta. The Ukrainian government delayed the ratification for a week, thereby complicating the beginning of the transfer process somewhat. The directive of the Ukrainian government was not signed until 2nd November. Nevertheless, two groups of Russian Long-Range Aviation maintenance specialists numbering 65 men in all arrived at Priluki and Uzin as early as 20th October. That day at 1100 hours Moscow time an IL-78 tanker captained by Chervinskiy took off from Engels-2 AB and set course for Chkalovskaya AB near Moscow. It was carrying a group of engineers and pilots of the 22nd GvTBAP headed by Col. A. I. Popov. At Chkalovskaya the group was cleared through Russian Customs before leaving the country and customs inspection of the cargo (equipment carried by the aircraft) was made. Here the group

Maj.-Gen. Pyotr D. Kazazayev, Deputy Commander of the 37th VA, played a key role in the transfer deal.

Col. Aleksey R. Serebryakov has the honour of hoisting the flag after ferrying another *Blackjack* to Engels.

The personnel at Engels line up to greet Tu-160 '17 Red', which was named *Priluki* and bore the 184th GvTBAP crest.

The captain of '17 Red' flies the Russian flag from the flight deck window on arrival.

from Engels was joined by 'Muscovites' – the top brass of the Air Army's engineering service, including its head Maj.-Gen. Kazazayev. At 1700 hours the same day the *Midas* departed from Chkalovskaya, heading for the Ukrainian airbase at Uzin. There, after passing the Ukrainian border and customs checks, the group divided: some of the specialists remained on site for the handover of three Tu-95MSs, while the greater part of the group departed for Priluki in the same IL-78 the following morning. Kazazayev headed this larger team; the smaller team remaining in Uzin was led by his deputy Col. V. F. Bondar'.

At Priluki, right after the Russian personnel had been assigned their temporary accommodation, a briefing took place with the participation of the Ukrainian military led by S. A. Osipov, the CO of the resident 184th GvTBAP. At the briefing it was decided to tow the Tu-160s across the hardstand of the maintenance base, two at a time, and move them to the flight line. At the maintenance base the bombers were guarded by Ukrainian servicemen; on the flight line this responsibility would pass to the Russians. The management of the Ukrainian base declared immediately that no jet fuel or automotive fuel (petrol and diesel fuel) was available and the tech staff would have to be transported jointly by the Russians and the Ukrainians. The vehicle assigned for carting the tech staff around the base was dubbed 'Santa Maria' (after Christopher Columbus' caravel) by the local wits.

Originally the Russians intended to fill the *Blackjacks*' tanks from the IL-78, but the bomber needed to be towed up to the tanker first. A serviceable tug was available in the base's motor vehicle pool, but there was no driver to drive it! The 184th GvTBAP's Deputy CO (Armament) V. M. Makagon gave orders to allocate two empty TZ-22 articulated refuelling

1096th TBAP officers and their wives welcome the arriving bomber crews at Engels with flowers.

This is how ex-Ukrainian Tu-160 '10 Red' looked in 2002.

bowsers to tow the bomber; it was possible to fill up the bowsers from the IL-78's tanks and then transfer the fuel to the Tu-160.

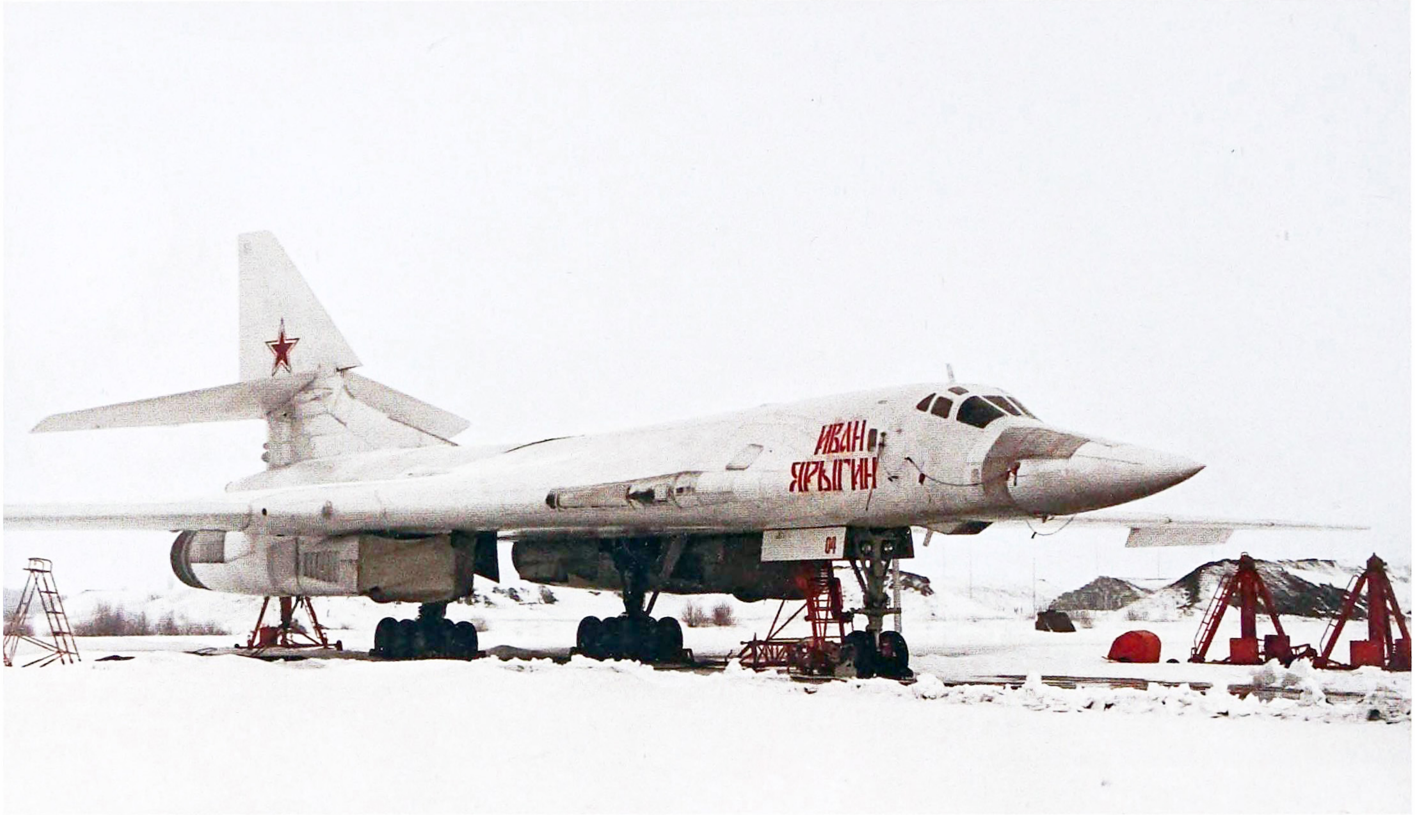
The Tu-160 coded '10 Red' was the first machine selected for handover and preparation for the flight to Engels.

The Ukrainian *Blackjacks* had not flown for three or four years; '10 Red' was a notable exception, having participated in the parade in Kreshchatik (Kiev's main street) on the occasion of the Ukraine's Independence Day in 1998 (and thus was one of at least three to gain Ukrainian Air Force insignia). The jets sat on the hardstand with empty tanks. Even to start up the APU it was necessary to fill two tons (4,410 lb) of kerosene in each aircraft's tanks. It has to be said that, despite sitting idle for a long time, the general condition of the bombers was not too bad. The aircraft had 90% of the designated service life remaining on them. All the aircraft were fully equipped and came complete with a full set of manuals and 'ship's papers'. They had been diligently prepared for storage – it was obvious that the local tech staff took their job seriously.

The acceptance of the bombers by the Russian party began on 22nd October. By then the first of the Tu-160s selected by the Russians was ready for engine running. This warrants a more detailed description, since the missile carrier had not even been towed at all for the past eight years, never mind flying!

The tanks of '10 Red' were filled with the required two tons of fuel which the Russians managed to wheedle out of the Ukrainians. The electrics engineers started up the APU, using a ground power unit (GPU), and then began warming up the avionics bays and flight deck by means of the onboard air conditioning system (ACS). Each and every avionics module was carefully examined, removed from its rack and dried to remove condensation before it could be switched on. The drying was done right in the flight deck, using the ACS; the flight deck was filled with such dense steam it looked like a steam bath. Majors V. M. Toptygin, A. A. Kurkanin, Ye. V. Sofiï, V. N. Aleksandrov, V. A. Moskalyov, Captains V. I. Stolerov, S. V. Balabonin, G. S. Fedorenko and V. V. Lichman worked with the onboard equipment. Defying the cold and biting wind, Majors V. I. Doodin and S. A. Kalinin, Captains N. A. Bemderov, A. A. Dobryukha, D. V. Bobyr' and A. P. Russkikh examined the airframe and engines, eliminating the defects that came to light. Maj. Yu. S. Kalinin supervised the work of the ground personnel.

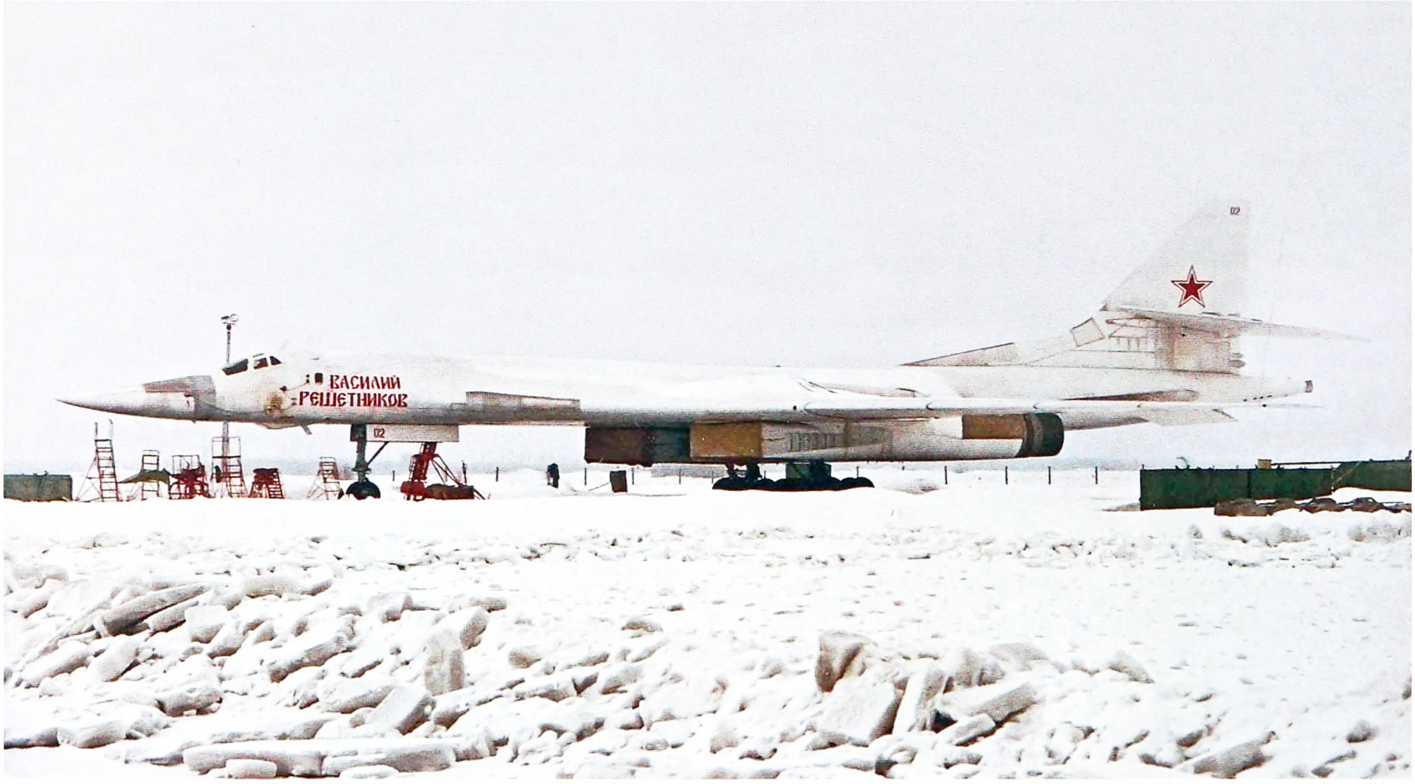
On 23rd October the second Tu-160, '16 Red', was towed to the maintenance base from the storage area. The next day it was jacked up for landing gear checks, which turned into a real can of worms. First, the electric pump on the right hydraulic jack failed; undeterred, the technicians began to work the manually driven back-up pump. Then the hydraulic fluid in the jacks ran out. The ground crew replenished the fluid and eventually managed to jack the aircraft up. It seemed that the gear checks could finally begin. Then, however, it turned out that no UPG-300 hydraulics test vehicle was available to build up the pressure in the bomber's hydraulic system! The APU had to be started up once again to create the necessary pressure.



One of the ex-Ukrainian Tu-160s became '04 Red' *Ivan Yarygin*.

On 25th October, Tu-160 '15 Red' was towed to the maintenance base hardstand.

The Russian delegation ran into daily problems with availability of ground support equipment. For several days the situation with fuel, oil and lubricants remained dire. The reply of Deputy CO Makagon was always the same: 'There's no kerosene, no petrol, and no diesel fuel either'. Still, a solution was always found in the end. Hydraulic fluid was only delivered by 8pm on 27th October, and then only enough for one aircraft ('10 Red'). According to plans, five Tu-160s should have been at the maintenance base by 27th October; in reality there were only three because the airfield tug had broken down. Preparation for ferrying



Another ex-UAF *Blackjack* at Engels as '02 Red' *Vasiliy Reshetnikov*.

'10 Red' to Engels began on 28th October. That day there had been delay upon delays since the early morning – first it turned out that 'Santa Maria' had not been refuelled in time, then the GPU and the UGZS-M nitrogen charging vehicle were not allowed to leave the motor vehicle pool.

All the same it was necessary to tow the bomber to the runway for engine checks at all power settings; should the engines be run on the maintenance base hardstand, the jet blast would simply blow away all structures located behind the plane. An ordinary KrAZ-255B six-wheel-drive prime mover would do for the purpose, but its tyres were totally worn out and could not provide the necessary traction! Besides, regiment CO Osipov had forbidden the use of the runway until an IL-78 tanker had landed at Uzin AB; Priluki AB was its designated alternate airfield, and the weather service had given a storm warning, which meant a diversion was probable. Once a representative of the local motor depot had been summoned airside, the tug availability problem was resolved, and the fuel transfer from the TZ-22 bowser to the bomber's tanks could begin. The refuelling took nearly two hours, but when it was finished the tug still was not there! Lt.-Col. Osadchiy, the commander of the local aircraft maintenance base, clarified the situation: 'There will be no tug – the driver is nowhere to be found, but we keep looking' (again!). After standing speechless for ten seconds or so, the Russian ground crew took the decision to tow the Tu-160 with the KrAZ-255B, augmenting it with an APA-5 (a GPU on an Ural-375D army lorry chassis) connected by a rigid towbar. This, too, was easier said than done – the 'sacred hour' (lunch time) had come, and after lunch the local drivers needed a siesta. Towage was postponed once again.

In the afternoon '10 Red' was at length towed to the runway. The engine running procedure was performed by Col. Aleksey R. Serebryakov, the CO of the 1096th TBAP based in Engels and operating six Tu-160s. No sooner had the first engine begun spooling up than some sort of liquid started dripping and pouring from everywhere on the aircraft. The start-up was aborted and the entire Russian ground personnel on site rushed to the machine; fortunately, however, the liquid turned out to be plain water, not fuel. Serebryakov ran the engines in all modes, cycled the wings and checked the operation of the control system. All systems functioned normally. After starting all four engines the crew was even authorised to taxi down the runway a little. When the work was done the commander reported that virtually no faults had been discovered; this again bore testimony to the reliability of the strategic aircraft created in Soviet days.

Having eliminated some minor faults in the aircraft's systems, the personnel started preparing for working on the second bomber, while General Pyotr Kazazayev reported to the Russian Air Force C-in-C that the first *Blackjack* was ready for the positioning flight to Engels.

Here is how Kazazayev describes the first days of team's sojourn at Priluki:

'On arrival at Priluki I went immediately to the airfield, to the part of it where the Tu-160s were parked. The area was surrounded by a barbed wire fence, and inside it was a Ukrainian guard post. As I was in military uniform, I went through this post unhindered and went immediately to the aircraft which had been half reduced to scrap metal. What struck me at once was that the Americans and Ukrainians had seemingly made a lot of effort to cut up the wing centre section [torsion box] – and failed. It lay there, still in one piece, and did not succumb to these efforts; apparently the Americans were having trouble with the scrapping of these aeroplanes, which says a lot about the power of Tupolev OKB design school. (*sic – Auth.*)

One thing that hurt me personally, as an aviation engineer, very much was that the scrapped aircraft included a machine with only 44 hours TTSN. It seems that the best machine in the unit had been chosen for scrapping on purpose. This fact testifies that our aircraft were, are and will be the best in the world and, as such, are certainly the bane of our competitors' existence.

But it was time to get down to work. That same day our technicians and engineers towed the first aircraft to the territory of the regiment's maintenance facility and started assessing its condition and preparing the machine for ferrying. I have to point out at once that the men set to work with a will, being aware that they were, in effect, saving these unique flying machines. I can give you such a comparison: when we first saw all the aircraft standing in the so-called 'reservation' they were a sorry sight – they reminded us of plucked chickens. And when we prepared the first machine and performed full power-on checks, it began to look like a White Swan. (***Bel**yy **leb**ed'* (White Swan) is the Tu-160's Russian nickname – *Auth.*)

Tu-160 '17 Red' retained its original tactical code in Russian service.

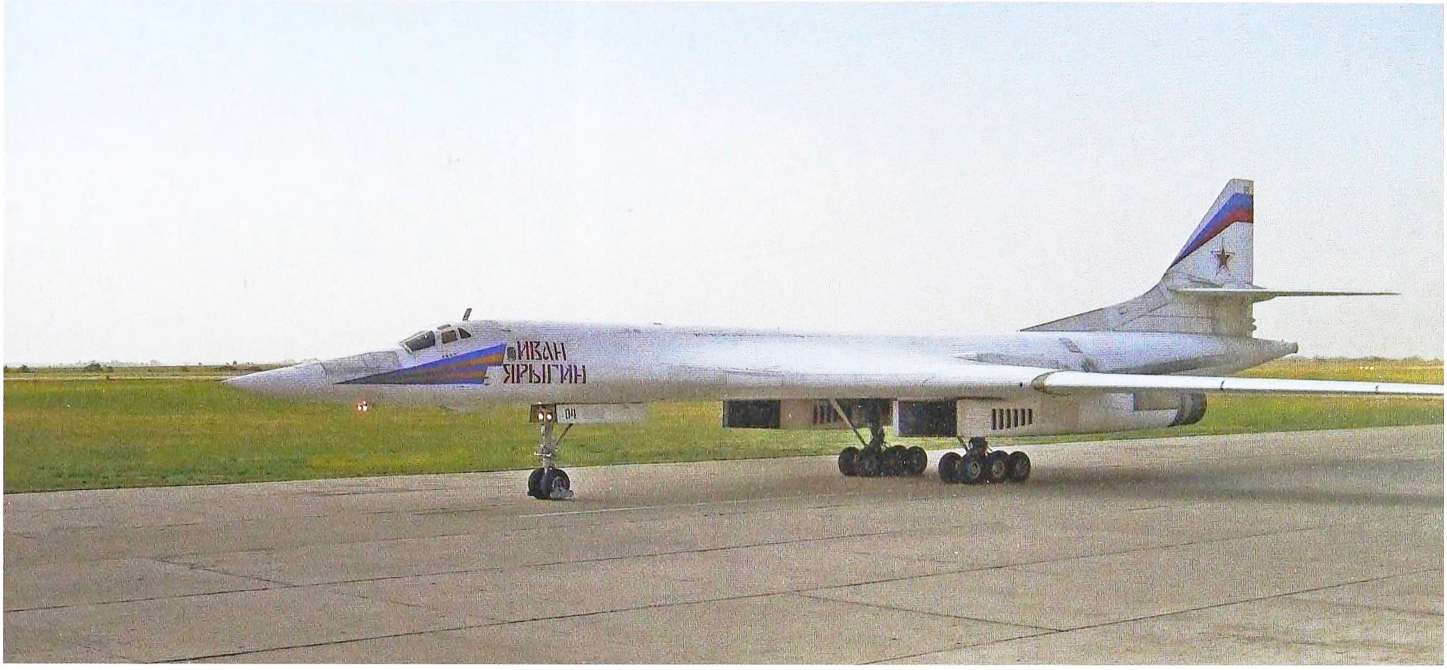
The first Tu-160 was ready to depart on the 11th day after the Russian group's arrival at Priluki. As early as 1st November the Russian military had filed a request via the command posts of the Russian and Ukrainian Air Forces, requesting permission to fly two aircraft to the Russian Federation – one Tu-160 from Priluki and one Tu-95MS from Uzin which had also been prepared by the Russian tech staff.

Yet, this was exactly when the problems began in earnest – the Ukrainian party would not give permission to fly. Maj.-Gen. Kazazayev addressed the Ukrainian Air Force Commander-in-Chief Col.-Gen. Viktor I. Strel'nikov with this problem; thanks to his help, he was able to address the Ukrainian Minister of Defence, who in turn reported the issue to the then Prime Minister of the Ukraine Valeriy P. Pustovoytenko, requesting that the go-ahead to ferry the two bombers to Russia be given ahead of the official directive of the Ukrainian Cabinet of Ministers concerning the inter-government agreement. After much bureaucratic wrangling the clearance was finally given on 4th November.

The Russian maintenance specialists started preparing the bombers for departure. After noon the Ukrainian Border Guards personnel arrived at the base, examined the aeroplane, looked inside the flight deck and gave the crew permission to take their seats. However, the Ukrainian customs officials (whose clearance was required) were still absent. The crew of Col. Aleksey R. Serebryakov stayed in the aircraft for about an hour but the border guards did not allow anybody else to approach the aircraft. General Kazazayev recalls this episode as follows:

Maintenance in progress on ex-UAF Tu-160 '07 Red' *Aleksandr Molodchiy*. Note that the name is applied in a different typeface.

АЛЕКСАНДР МОЛОДЧИЙ
07



'04 Red' in its current guise with a Russian flag fin flash and a nose flash in Air Force flag colours.

'All of a sudden I heard the APU cranking up, followed in short order by the first engine. Totally bewildered, as the customs officials were not there [to give authorisation], I drove to the control tower and, on entering the driveway to it, saw a car with the customs officers. I stopped my car and climbed out. Noticing the [Russian] general, they accosted me and asked why the aircraft was starting up without customs inspection. Being in no amicable mood, I retorted: "What took you so long? You might as well have come at midnight." After that, they cancelled the take-off without giving any plausible explanation.

We had no choice but to re-submit the request for the next day. Having had a talk with the Ukrainian Air Force command and reported the scandalous actions of the customs officials, I received assurance that next day the chief of the Customs Service would arrive from Chernigov to attend the take-off.

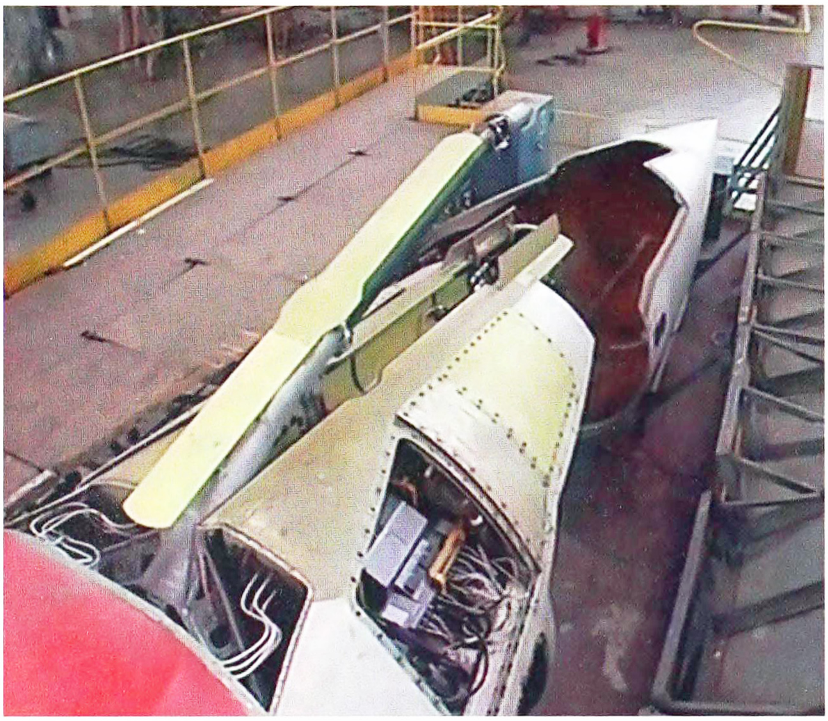
Next day we began preparing the aircraft for take-off first thing in the morning. Around 10am the 'big brass', as we call it, did indeed arrive from Chernigov. We were introduced to each other; what struck me was that the man was wearing a very handsome uniform and general's epaulets, and his peak-cap featured very expensive gold embroidery. I have to say that the customs chief turned out to be a fairly decent man; in my presence he gave the customs officers I spoke to yesterday a dressing-down for negligence and ordered them to complete the formalities within 30 minutes – and so they did, by the way.

When the crew started the engines and the bomber started taxying out to the runway, the customs general asked me if he could videotape the take-off. I gave my consent, asking what he wanted it for – especially considering that there was a thick fog on the field [and the video would be of poor quality]. He told me that he had orders to deliver video proof of the bomber's take-off to the Ukraine's Security Council.

Finally, at 1530 hours on 5th November 1999, Col. Aleksey R. Serebryakov took up the Tu-160 from Priluki and set course for Russia, having first made a low farewell pass over the garrison and the airfield. I was contacted on the phone by the Ukrainian Air Force Commander-in-Chief Viktor I. Strel'nikov, who told me that a group of media correspondents from Kiev would shortly arrive at the airfield and asked me if I would kindly give an interview for the local TV channels. I told him that I would have to report to my superiors first and ask for permission, and if it was granted I would be glad to oblige.

Having reported to the Air Force C-in-C Army General Anatoliy M. Kornukov, I obtained permission. In the interview I said many a word of praise for the technical staff of the Ukrainian Air Force which had maintained the bombers as best they could and assisted us in preparing them for the flight; the first plane departed, many of the local servicemen came to see it off in full parade dress. And not to the grave, mind you, but to a place where, I hope, it will find a long and happy life – in revenge to those who had been destroying these aeroplanes.'

The departure of the first 'White Swan' from the Ukraine to Russia was also closely



A Tu-160 being assembled at the KAPO plant in Kazan'. The ex-UAF *Blackjacks*, augmented by new-build examples, have allowed the Russian Air Force to equip a full regiment.

watched by the Americans from the scrap yard; they must have been disappointed to watch their 'prey' escape. Once the first two aircraft had returned to Russia, the next group of technical staff led by the DA's Deputy Chief Engineer Col. V. V. Ghermanovich was formed in December of the same year, departing to the Ukraine; in 2000 this team finished the preparation and ferrying of the remaining aircraft. Among the planes transferred to Russia was a Tu-160 coded '12' – the first *Blackjack* shown publicly on 2nd August 1988; actually it was a special event staged at Kubinka AB near Moscow for the then US Secretary of Defence Frank C. Carlucci, not for the general public, but the event made the evening news on Soviet TV. Incidentally, as he climbed into the flight deck, Carlucci hit his head painfully on a circuit breaker panel, which has been dubbed 'the Carlucci panel' in the Russian DA ever since. Tu-160 '18 Red', which was shown to the political and military leaders of the CIS republics at Machoolishchi AB near Minsk on 13th February 1992, was also among the aircraft transferred to Russia.

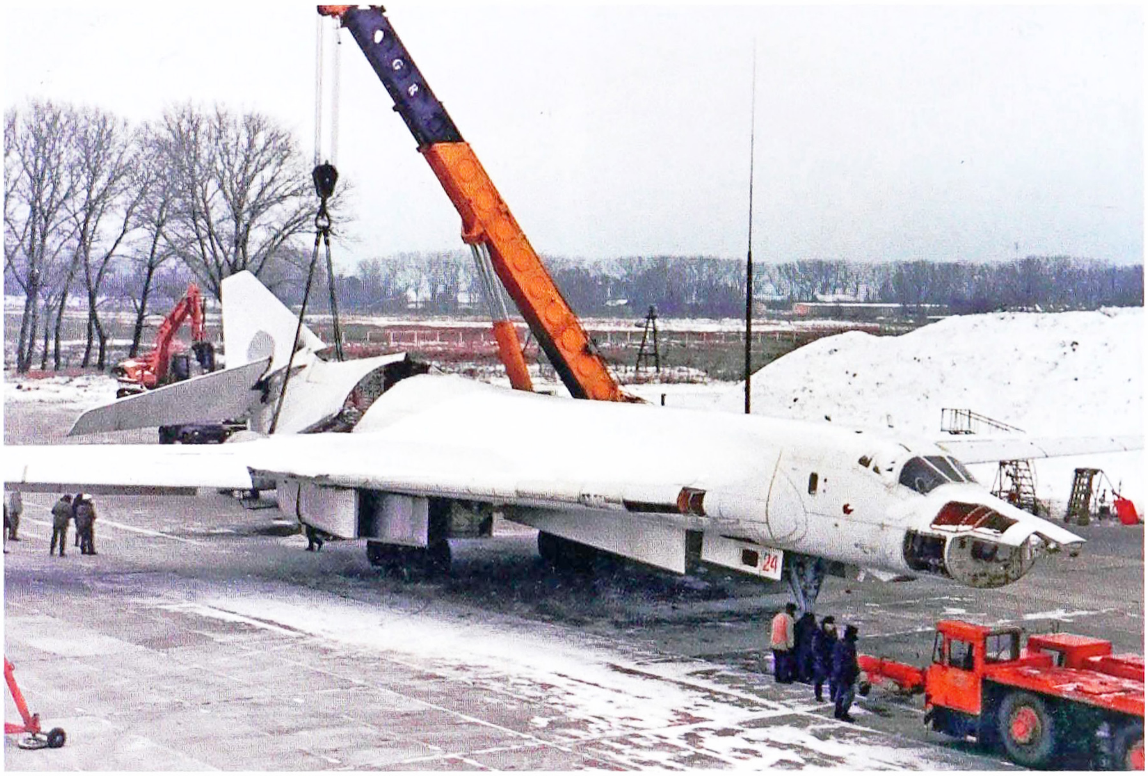
Overcoming the considerable difficulties associated with the shortage of ground support equipment, social problems in day-to-day life, problems with spares deliveries (all damaged and time-expired equipment units were replaced with units delivered from Russia by an IL-78), the Russian Air Force engineers and technicians nevertheless coped with their task. All eight Tu-160s ('10', '11', '12', '15', '16', '17', '18' and '26') and three Tu-95MSs were safely flown to Engels. The Russian fleet of Tu-160 strategic missile carriers was thus doubled. '11 Red' and '18 Red' were the last of the transferees to land at Engels. Five of the *Blackjacks* were ferried by the crew comprising captain Lt.-Col. Aleksey R. Serebryakov, co-pilot Maj. A. V. Kalinin, navigator Lt.-Col. I. A. Sazonov and WSO Maj. Yuriy G. Paltusov; the others were ferried by captain Lt.-Col. Igor' V. Skitskiy, co-pilot Lt.-Col. Adamov, navigator Lt.-Col. N. M. Barsukov and WSO Maj. S. P. Alyoshin.

In Engels the bomber crews were given a grand reception. After the bombers had taxied in to the hardstand, the Russian national flag rose over them. A new page in the history of the ex-Ukrainian, and now Russian, Tu-160s

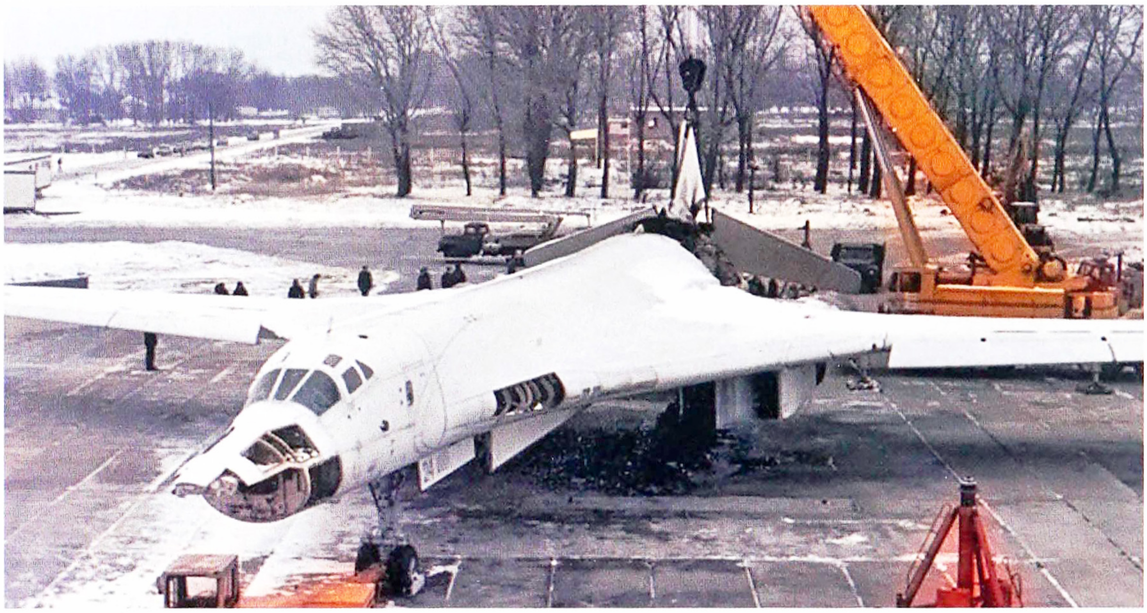
More views of brand-new Tu-160s being assembled at KAPO alongside Tu-214 medium-haul airliners. The *Blackjacks* obtained from the Ukraine were given a refurbishment by KAPO before entering service.

ЭКОНОМИЯ И БЕРЕЖЛИВОСТЬ-ПУТЬ К НАШЕМУ БОГАТСТВУ!

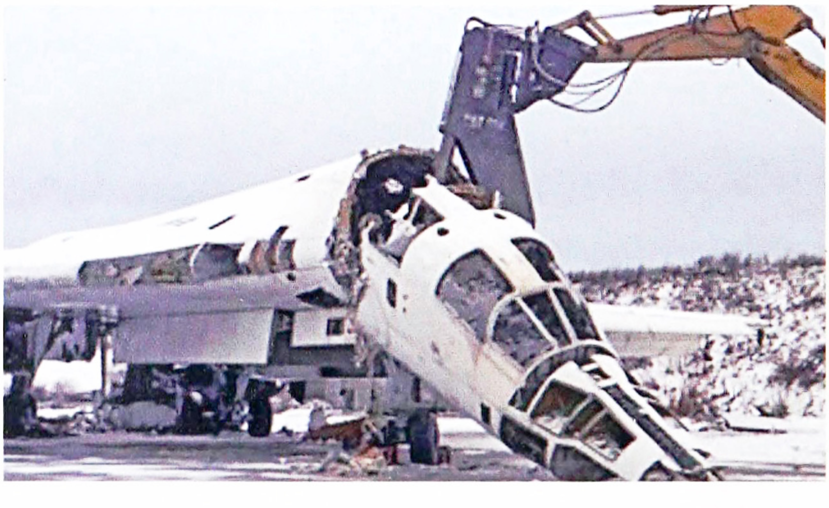
'24 Red' was the first Ukrainian Tu-160 to be scrapped under the Cooperative Threat Reduction Programme.



The severed rear fuselage of '24 Red' is lifted clear by a heavy-duty crane.



Another UAF *Blackjack* is 'beheaded' by a hydraulic cutter.



had begun. The bombers appeared to be in pretty good condition; nevertheless, all ex-Ukrainian *Blackjacks* were given an overhaul by the manufacturer, the KAPO plant in Kazan', after arrival in Russia.

The elimination of the Ukrainian Tu-160s which had been such a thorn in the side for the USA, began in 1998 and was completed three years later. The last remaining Tu-160 of the Ukrainian Air Force was destroyed on 2nd February 2001. One *Blackjack*, which was stripped of combat capability, was donated to the aerospace museum in Poltava. On 17th May 2001 the last Ukrainian Tu-95MS strategic bomber (coded '94 Red') was scrapped in Uzin. To give the reader an idea of how the liquidation of the former Soviet aviation power in the Ukraine proceeded, we will describe this in more detail. To the music of the rock group Dire Straits the workers cut the bomber's wings along pre-marked lines with a chainsaw. Well, 'he who pays calls the tune'... Before that, the tail of the last Tu-95MS had been severed and the fuselage cut up; the flight deck section was cut off last. This the bomber had been cut into five sections along the lines co-ordinated by an inspection group which included American experts. After that the aircraft was broken up into smaller parts and the metal sent for recycling. A nose landing gear door carrying the aircraft's tactical code was taken to a museum in Washington. The 'demolition derby' was attended by representatives of the US Department of Defense. Thus, the Ukraine liquidated all 38 Tu-160 and Tu-95MS strategic aircraft which it inherited from the Soviet Union. Earlier, 483 Kh-55 cruise missiles had been liquidated.

Currently two former Soviet strategic bombers (a Tu-160 and a Tu-95MS) remain in the Ukraine as museum pieces in Poltava. Two more Tu-95Ms have been converted to ecological survey aircraft. Additionally, Tu-22M2s and Tu-22M3s are preserved in the Kiev and Poltava museums.

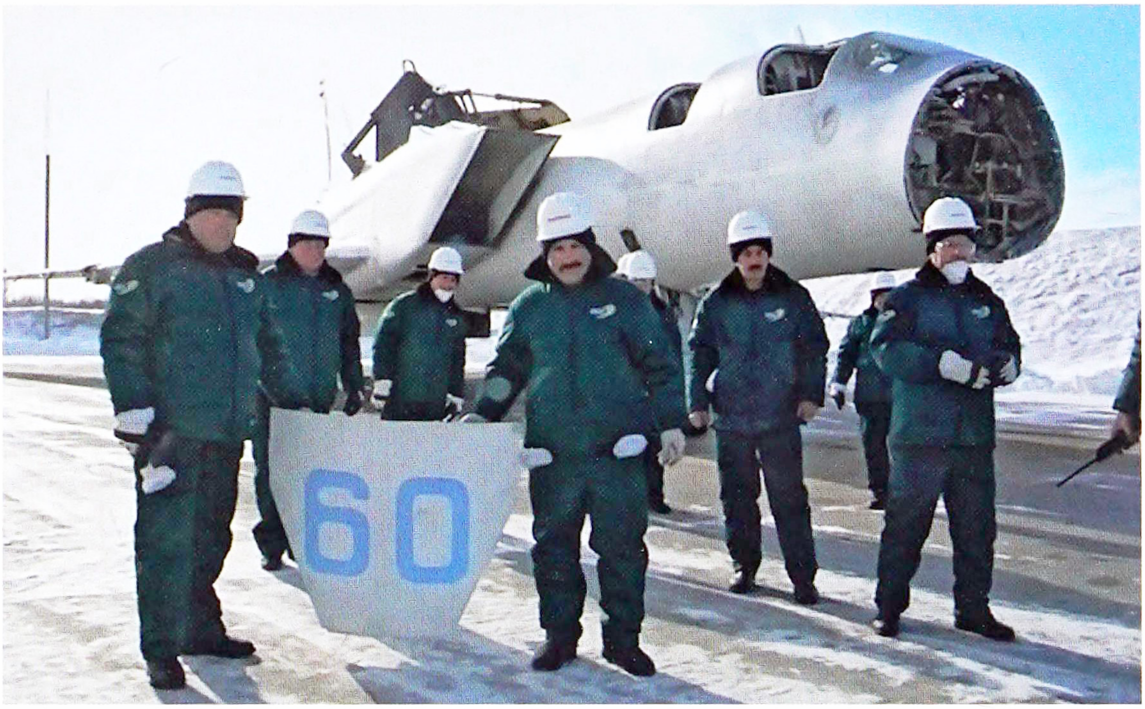
As noted earlier, the USA has funded the liquidation of the ex-Soviet strategic aircraft. According to press reports, the allocated sum was US$ 7,720,000.

The 185th TBAP Tu-22M3s at Poltava, including '72 Red', were also scrapped.

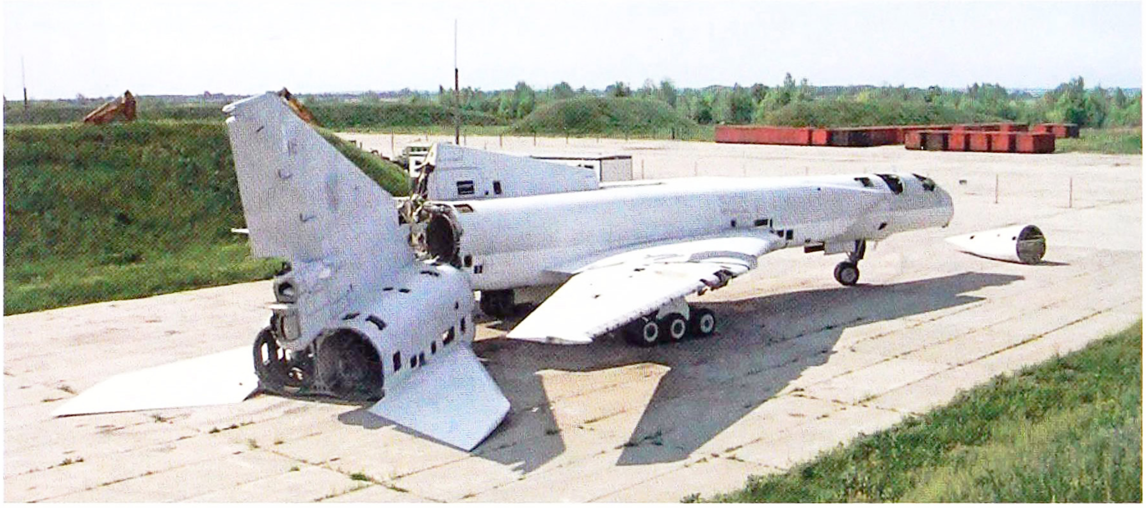
The 'plane eater' goes to work on the rear fuselage of a *Backfire-C* at Poltava. The nose is already gone.

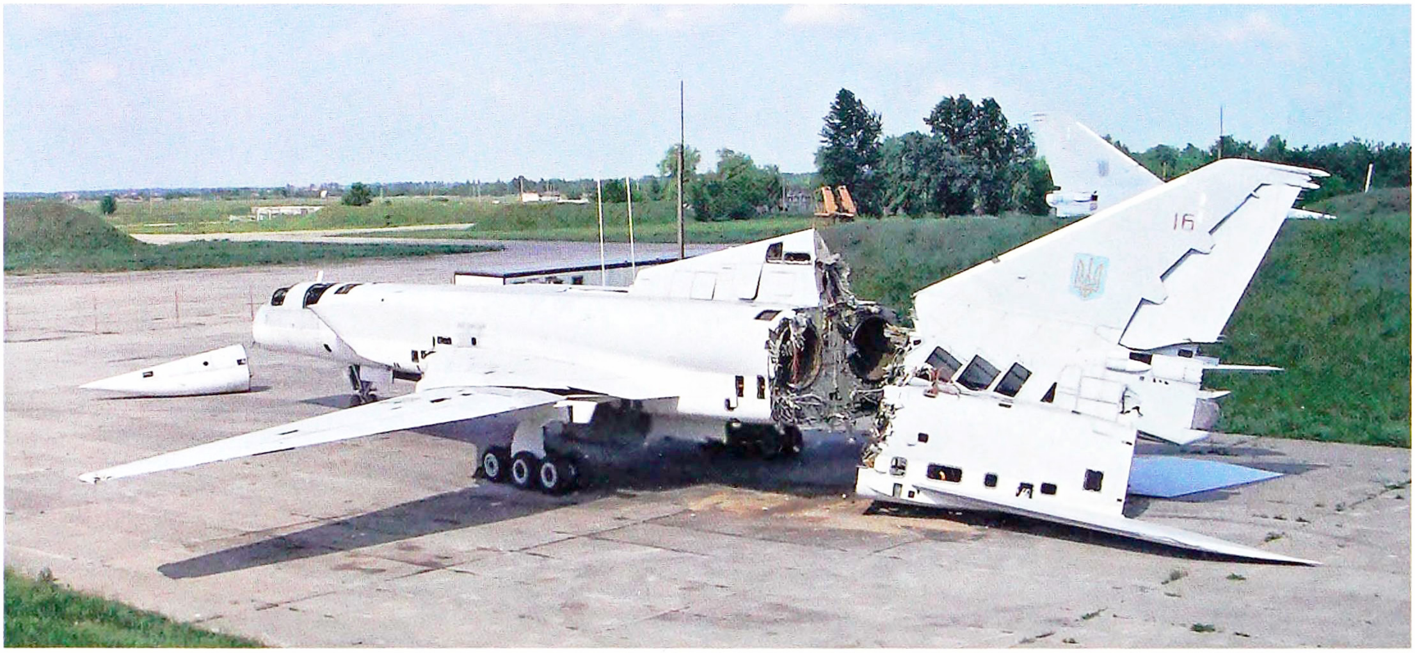
Within minutes, the rear fuselage has been severed from the rest of the airframe.

The sad remains of a Ukrainian Tu-22M3 coded '26 Red'.

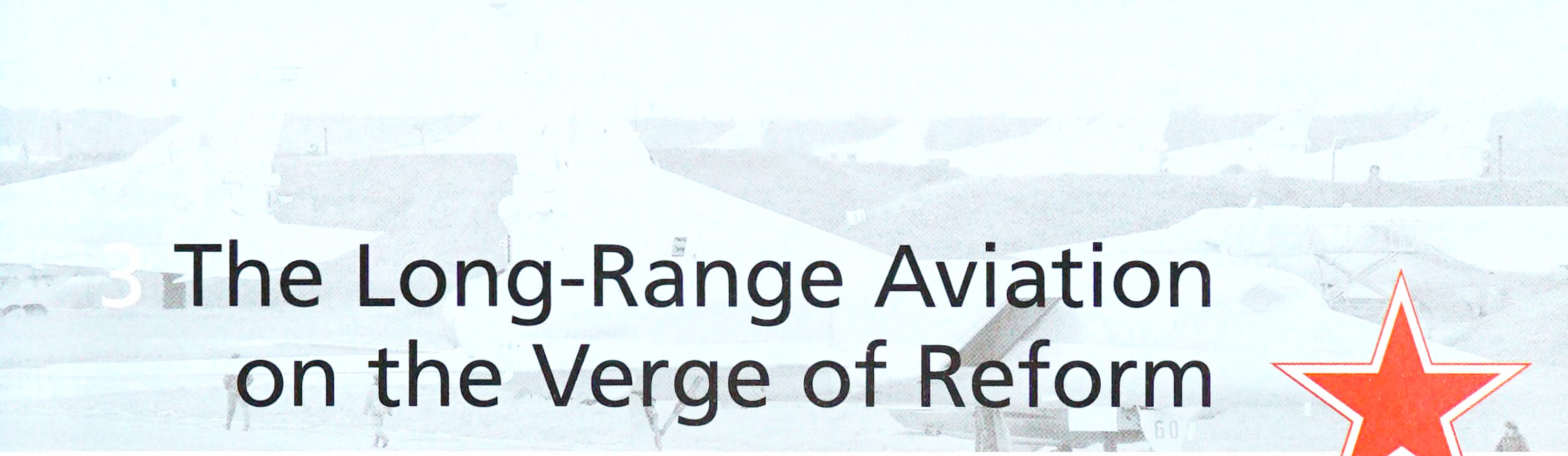


'To the victor belong the spoils'? The scrap-mongers hold the nose gear door of Tu-22M3 '60 Blue' like the shield of a vanquished knight.





'16 Red', a 185th TBAP Tu-22M3 in Ukrainian markings, being scrapped at Poltava.



3 The Long-Range Aviation on the Verge of Reform

The following is the order of battle (orbat) of the Russian Air Force's Long-Range Aviation as at 2008, that is, immediately prior to the far-reaching reform of the Russian Armed Forces begun in 2009.

37th (Strategic) Air Army of the Supreme High Command (37th VA VGK (SN))

The headquarters of the 37th VA VGK (SN) is located in Moscow.

Since its establishment under that name, the 37th (Strategic) Air Army of the Supreme High Command has been headed by the following Commanders:

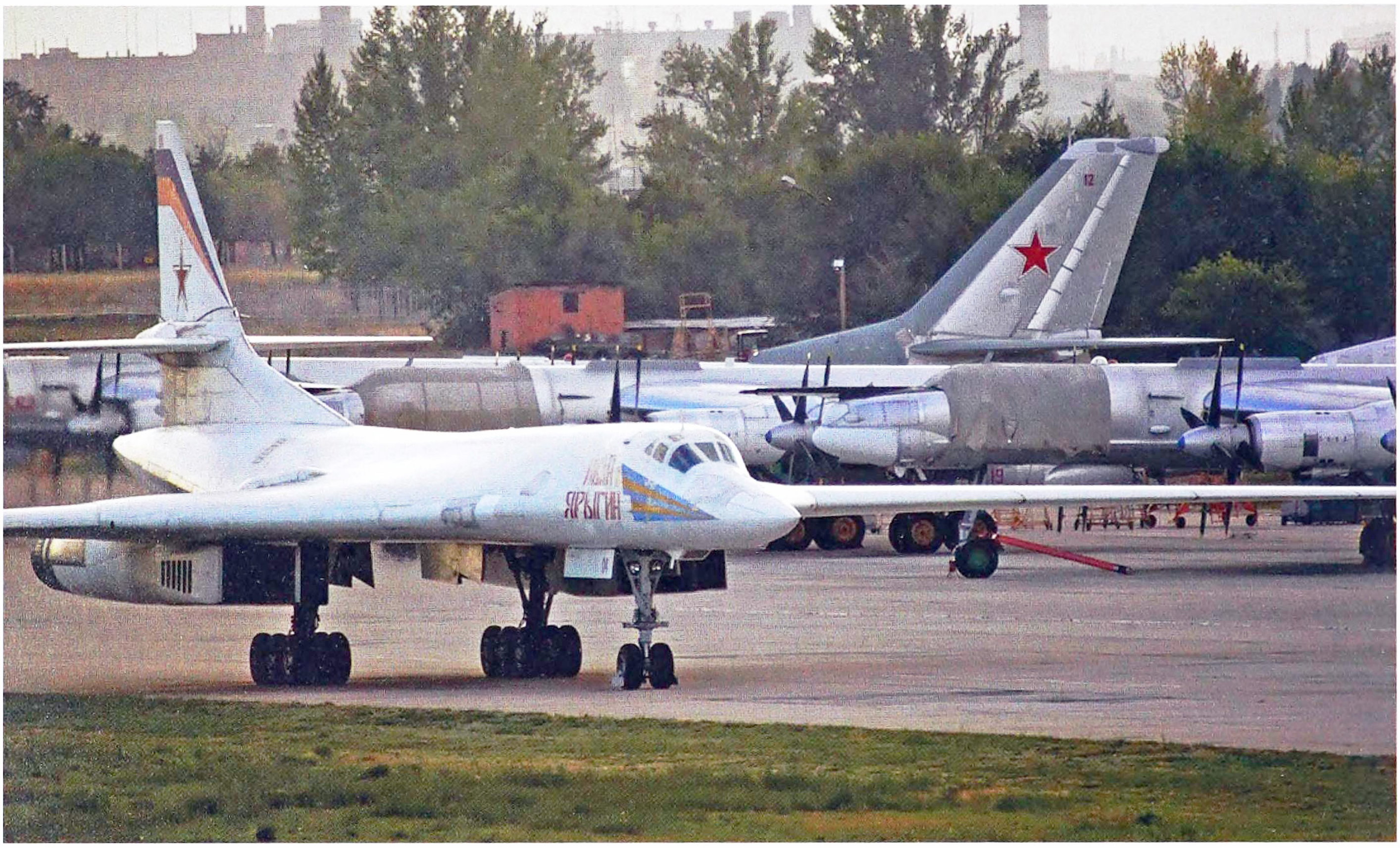
Lieutenant-General Igor' I. Khvorov (2002-2007);
Major-General Pavel V. Androsov (2007-2009);
Major-General Anatoliy D. Zhikharev (from September 2009).

The 37th VA VGK (SN) comprised the following divisions and units:

22nd *Donbasskaya* Red Banner Guards Heavy Bomber Division (GvTBAD)

Immediately after the break-up of the Soviet Union the 22nd GvTBAD headquartered in Engels, Saratov Region, southern Russia, comprised four regiments:

- 200th *Brestskiy* TBAP, which was excluded from the division's orbat in 1993 due to being redeployed from Belorussia to the Asian part of Russia;
- 203rd *Orlovskiy* Guards Aerial Refuelling Regiment (GvAPSZ – *Gvar**dey**skiy* ***aviapolk*** *samo**lyo**tov-za**prav**shchikov*), originally based at Engels-2 AB, which moved to Ryazan' on 1st September 2000 and became a unit directly reporting to the Commander of the 37th VA VGK (SN);



A 121st GvTBAP Tu-160 ('04 Red' *Ivan Yarygin*) taxies past 184th TBAP Tu-95MSs at Engels-2 AB.

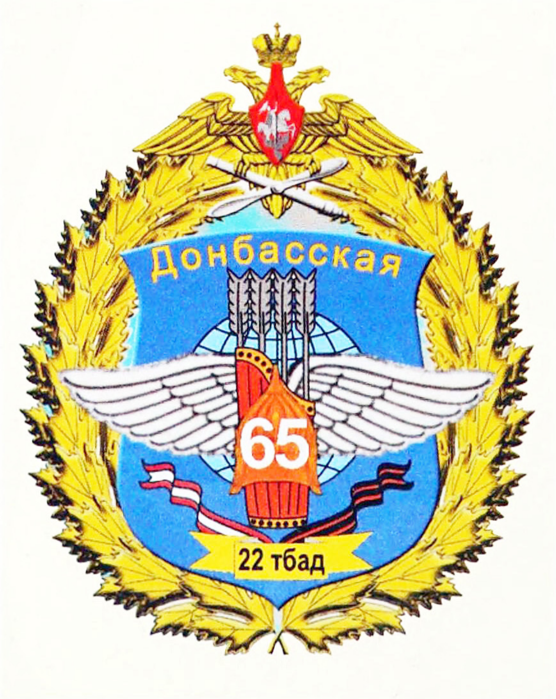
Previous page: Bombers and officers line up in smart parade formation to celebrate 65 years of the 22nd GvTBAD.

- 121st *Sevastopol'skiy* Red Banner GvTBAP, Engels-2 AB;
- 182nd *Sevastopol'sko-Berlinskiy* Red Banner GvTBAP, which was excluded from the division's orbat on 1st May 1998.

As of early 2008 the division also comprised four regiments:

- 121st *Sevastopol'skiy* Red Banner GvTBAP, Engels-2 AB (operating Tu-160s);
- 184th *Poltavsko-Berlinskiy* Red Banner GvTBAP (decorated with the Lenin Order), established at Engels-2 AB in the Summer of 2000 (operating Tu-95MSs);
- 52nd GvTBAP, Shaikovka AB, included into the division's orbat on 19th February 1998 (operating Tu-22M3s);
- 840th Red Banner TBAP, Sol'tsy AFB, included into the division's orbat on 19th February 1998 (operating Tu-22M3s).

(Note: The honorary appellations *Don**bass**kaya*, *Or**lov**skiy*, *Sevas**topol**'skiy* and *Pol**tav**sko-Ber**lin**skiy* were given for liberating the Donetsk coal mining area (Donbass) in the Ukraine, the cities of Oryol (Russia), Sevastopol' (the Ukraine), Poltava (the Ukraine) and taking Berlin.)



A badge signifying the 65th anniversary of the 22nd *Donbasskaya* TBAD.

Over the years the 22nd GvTBAD was commanded by the following people:

Guards Major-General A. P. Tomov (from 1990);
Guards Major-General V. I. Nikitin (from 1993);
Guards Major-General V. V. Mokhov (from 1994);
Guards Major-General Anatoliy D. Zhikharev (from 2000);
Guards Major-General Aleksandr V. Blazhenko (from 2009).

326th *Tarnopol'skaya* TBAD decorated with the Kutuzov Order (2nd Degree)

In the final years of the Soviet Union's existence (1988-89) the 326th TBAD was involved in the closing stage of the Afghan War. The division's bombers made more than 600 sorties against targets in Afghanistan, including 265 night sorties, and delivered 3,684 kg (8,121 lb) of bombs. In post-Soviet times (the 1990s) the division's units saw action in the North Caucasus (during the First Chechen War) and in Tajikistan near the Afghan border.

In 1998, when the Long-Range Aviation was in the midst of reorganisation, three other heavy bomber divisions – the 31st, 55th and 73rd TBADs – were merged with the 326th TBAD. The HQ of the new division, which retained the latter number, was moved to the Amur Region of the Russian Far East.

As of early 2008 the 326th *Tarnopol'skaya* TBAD comprised four regiments:

- 79th TBAP decorated with the Red Star Order, Ookraïnka AB (operating Tu-95MSs)
- 182nd *Sevastopol'sko-Berlinskiy* Red Banner GvTBAP, Ookraïnka AB (operating Tu-95MSs)
- 200th *Brestskiy* GvTBAP, which was excluded from the division's orbat in 1993 due to being redeployed from Belorussia to the Asian part of Russia;
- 444th Red Banner TBAP decorated with the Kutuzov and Aleksandr Nevskiy Orders, Vozdvizhenka AB (operating Tu-22M3s and Tu-22MRs)

(Note: The appellation *Tar**nop**ol'skaya* was given for liberating the town of Ternopol' in the Ukraine, which was known as Tarnopol' until 1944.)

Over the years the 326th TBAD was commanded by the following people:

Major-General V. A. Yanin (from 1991);
Major-General Igor' I. Khvorov (from 1992);
Major-General S. Ya. Razin (from 1997);
Major-General K. K. Dement'yev (from 2001);
Major-General A. S. Konovalov (from 2003);
Colonel (later Major-General) Aleksandr I. Afinogentov (from 2004);
Colonel Yu. Kuznetsov.

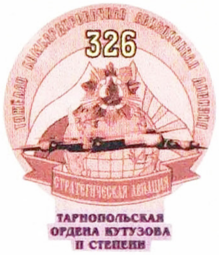
60 лет
22 ТБАД

A badge marking the 60th anniversary of the 22nd GvTBAD.

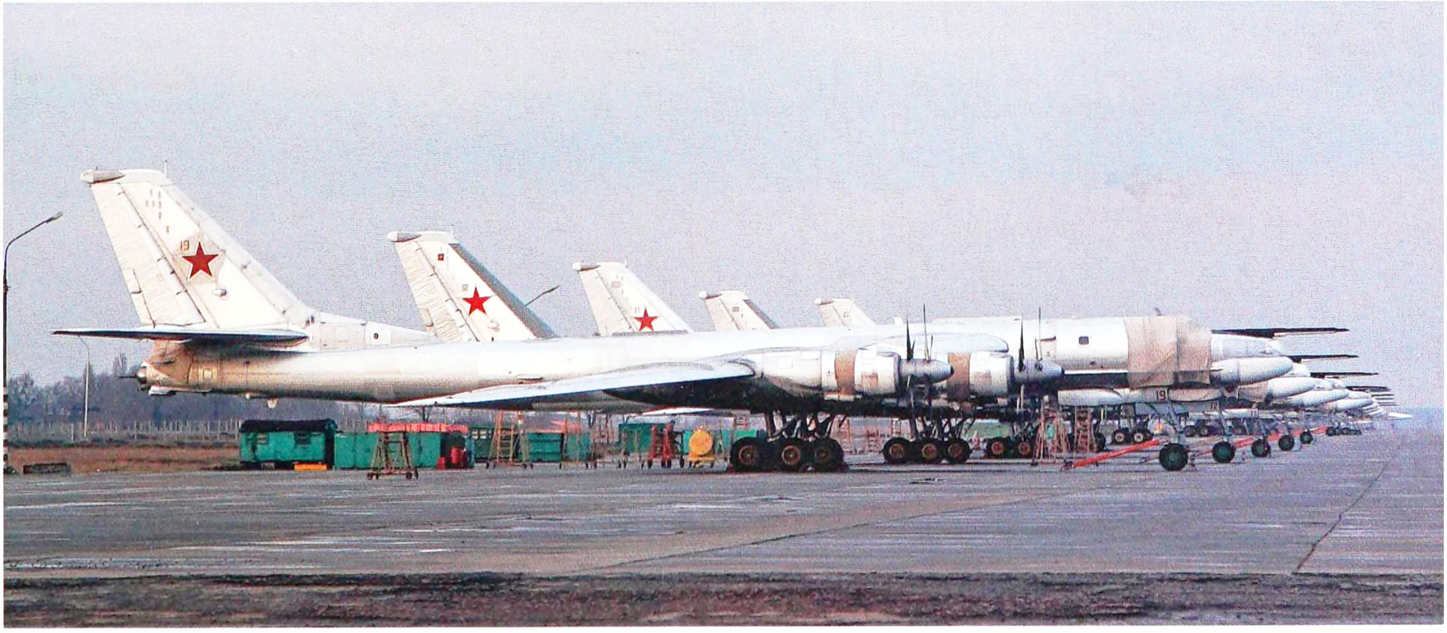
The following is a rundown of the regiments forming these two divisions, as well as of the other Long-Range Aviation units.

121st *Sevastopol'skiy* Red Banner GvTBAP

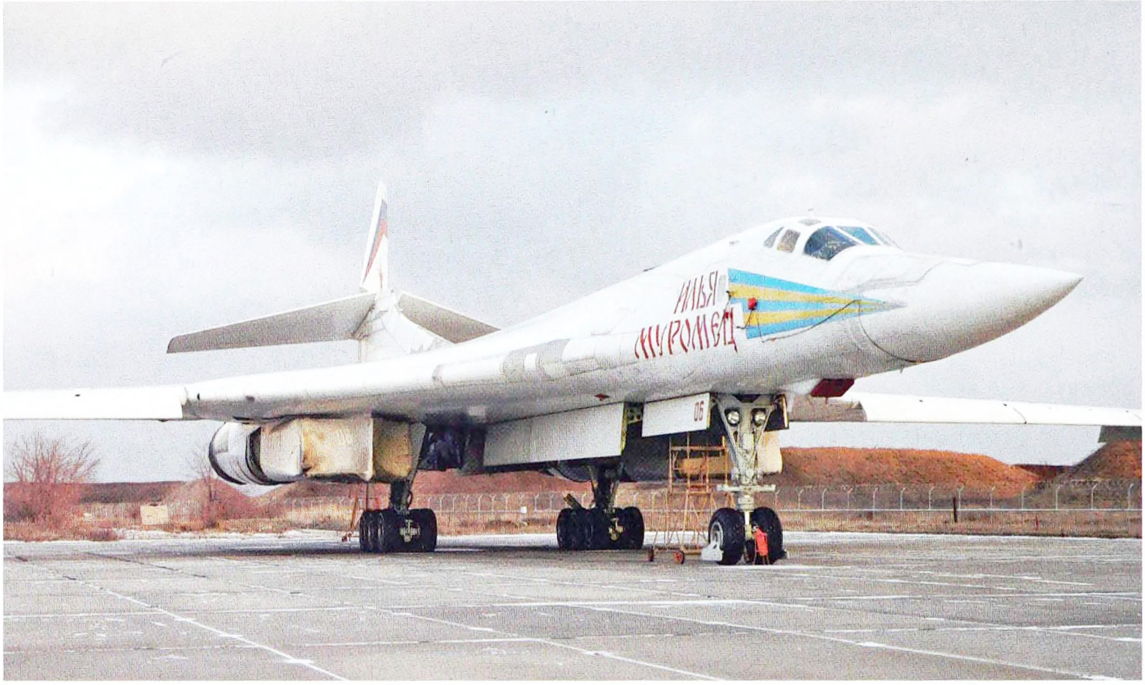
In February 1992 the 1096th TBAP based at Engels-2 AB near Saratov began conversion training for the Tu-160. As noted earlier, at the beginning of the year the Russian Air Force (Long-Range Aviation) did not have a single Tu-160 on the inventory, as all *Blackjacks* operational in Soviet days had been left behind at Priluki in the newly-independent Ukraine. At that point 13 more Tu-160s were in various stages of completion at the KAPO plant in Kazan'. The first three of these were delivered to the 1096th TBAP as early as March-May 1992, the first bomber arriving at Engels-2 AB on 14th February; two more followed in 1993 and another one in early 1994. That was all for the time being; in 1995 it was decided to com-



The crest of the 326th TBAD.



The 184th TBAP flight line at Engels. The nearest Tu-95MS is an ex-UAF machine.



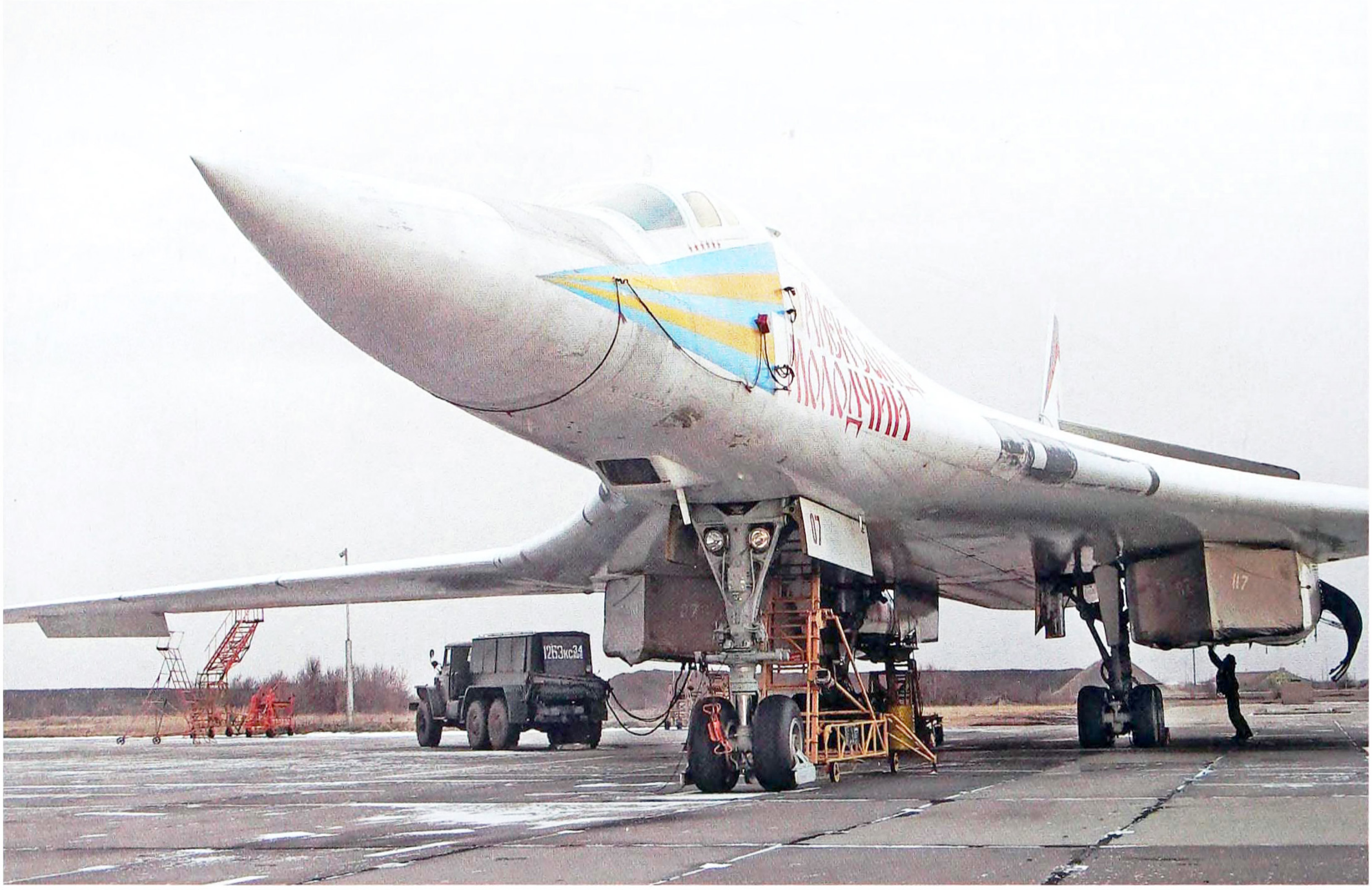
The DA started naming its Tu-160s in 1995. '06 Red' *Il'ya Muromets* was one of the first; the name is in stylised ancient Slavic typeface.

A badge of the 121st *Sevastopol'skiy* GvTBAP.

plete the three Tu-160s at KAPO having the highest degree of completion and scrap the other four unfinished airframes. Yet the plans to complete and deliver these machines were hampered by lack of funding. Meanwhile, an exodus began of the airmen and ground personnel who had flown and maintained the Tu-160s at Priluki; refusing to swear allegiance to the Ukraine, they wanted to continue their service in the Russian Air Force.

The first Tu-160 sortie from Engels was flown on 29th July 1992; the aircraft was captained by Lt.-Col. Aleksandr S. Medvedev, one of the pilots who had exchanged Priluki for Engels shortly before. Tu-160 operations in Russia effectively had to start from scratch, as

Tu-160 '07 Red' *Aleksandr Molodchiy* undergoes maintenance at Engels.

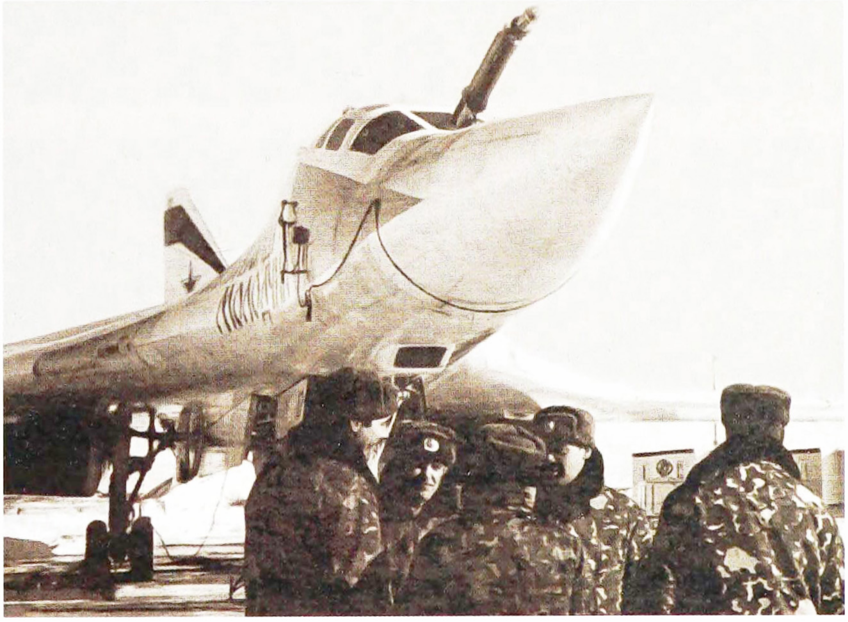


Engels-2 AB lacked the necessary support infrastructure for this highly complex aviation system and the infrastructure had to be built from the ground up.

On 22nd October 1992 a Tu-160 captained by Guards Lt.-Col. Anatoliy D. Zhikharev, the 1096th GvTBAP's CO, successfully made the Russian Air Force's first launch of a Kh-55SM cruise missile against a practice target. (As noted above, in September 2009 Zhikharev was appointed Commander of the Long-Range Aviation.) The crew also included co-pilot Guards Lt.-Col. N. Moiseyenko, navigator Guards Lt.-Col. A. Gavrilov and WSO Guards Lt.-Col. A. Pakulev. An identical mission was flown the following day by a crew under Guards Lt.-Col. A. V. Malyshev.

The grand military parade at Poklonnaya Gora in Moscow on 9th May 1995 on the occasion of the 50th anniversary of VE-Day became a special event in the history of the 121st GvTBAP. The parade featured a large Air Force component, and the first fixed-wing aircraft in the flypast was Tu-160 '06 Red' *Il'ya Muromets* accompanied by four MiG-29s of the Russian Air Force's *Strizhi* (Swifts) aerobatic team from Kubinka. The bomber, which was captained by none other than Pyotr S. Deynekin, had flown non-stop from Engels-2 AB. Afterwards, Tu-160s performed in formation with the Strizhi or the Su-27 fighters of the *Roosskiye Vityazi* (Russian Knights) team many times at various air events.

A Tu-160 crew (left to right: Malyshev, Vishnyakov, Krasnov, Kolesnikov) after the first Kh-55SM launch on 22nd October 1992.

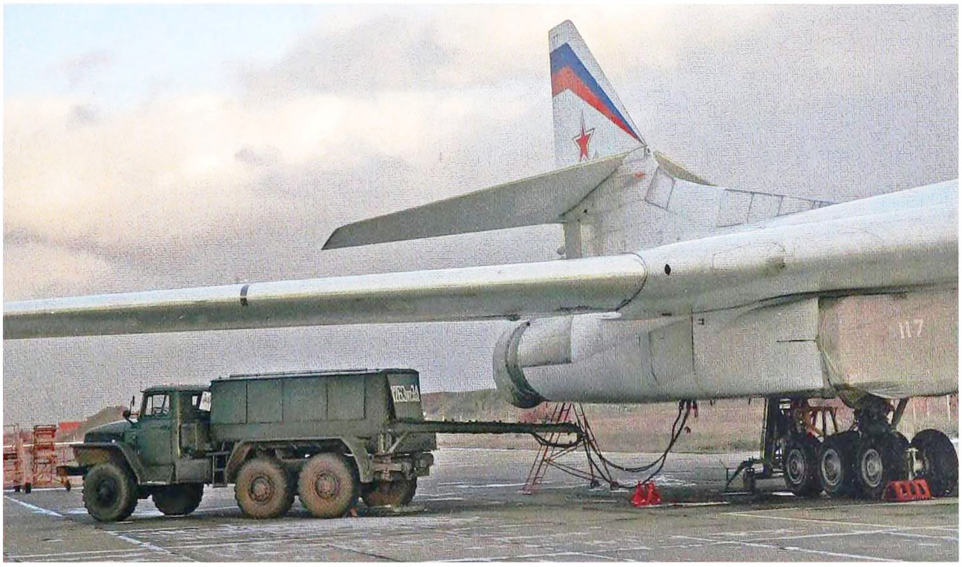


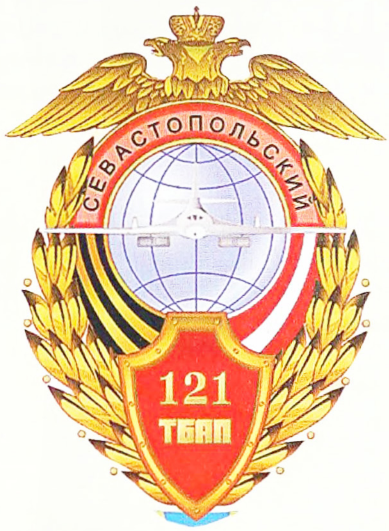
Tu-160 '07 Red' with the IFR probe extended.

АЛЕКСАНДР
МОЛОДЧИ

The Russian Minister of Defence Sergey B. Ivanov after a flight in the same Tu-160 with Igor' Khvorov (left) and Anatoliy Zhikharev (right) in August 2003.

ИВАН
ЯРЫГИН
04
04





The 121st GvTBAP unit crest.

In 1995 the 1096th TBAP disbanded. Its aircraft and personnel were transferred to the co-located 121st GvTBAP, which had been operating Myasishchev 3MD *Bison-C* bombers; the latter type had just been withdrawn.

In 1995 the regiment switched to a new structure: Squadrons 1 and 2 flew Tu-160s, while Squadron 3 operated Tu-134UBL pilot trainers. However, this situation did not last long – not least because there were not

Opposite page: Afternoon scene at Engels with '04 Red' *Ivan Yarygin* undergoing maintenance.

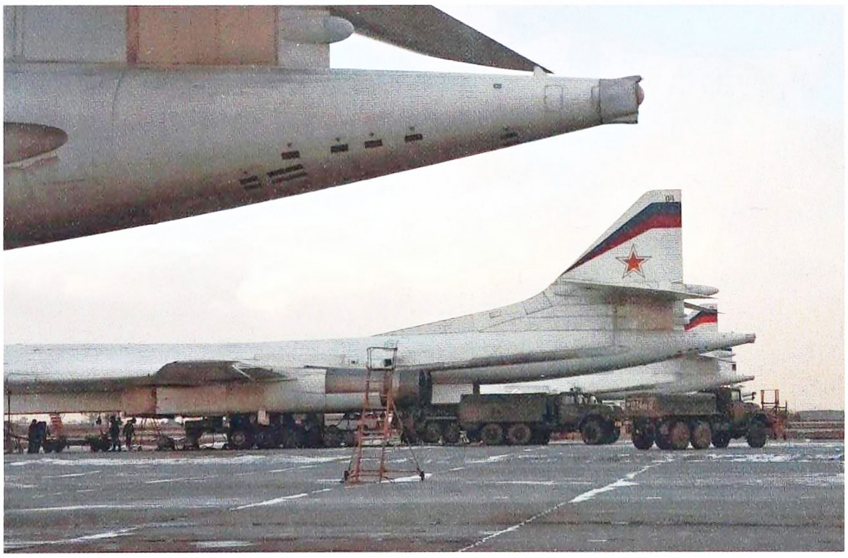
'19 Red' *Valentin Bliznyuk* makes a spectacular take-off, trailing nitrous oxide stained exhaust.

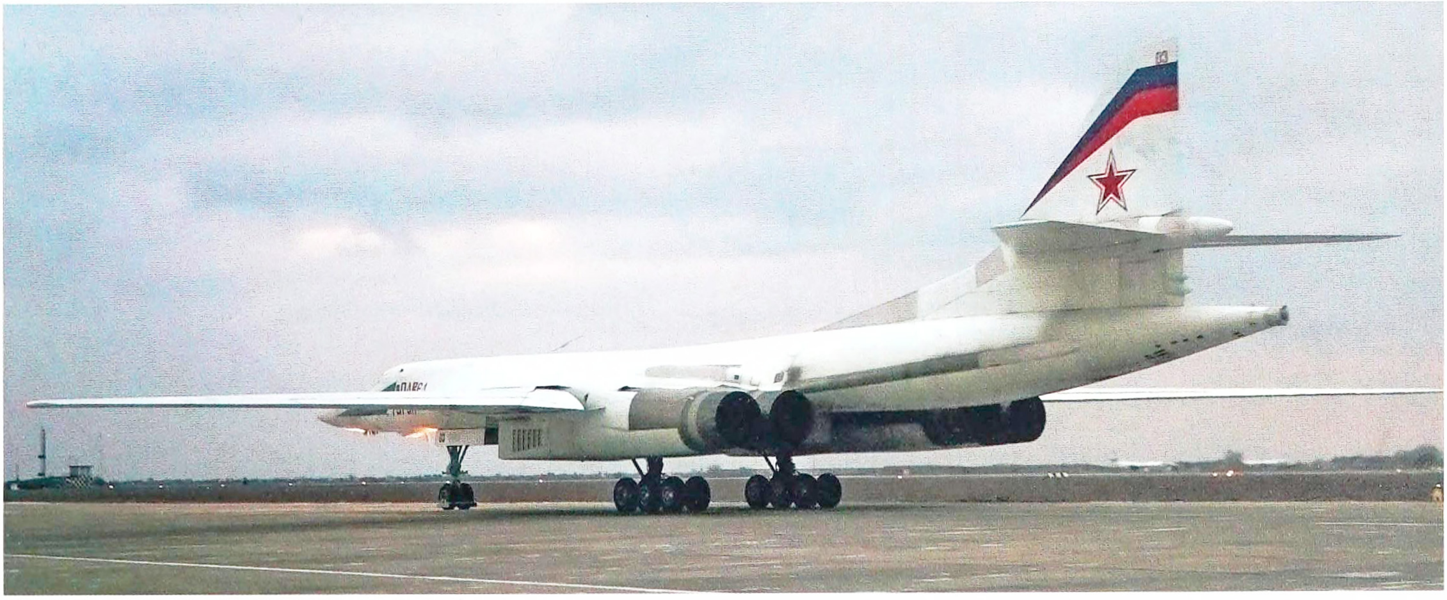
Tu-160 '15 Red' *Vladimir Soodets* sits with the cockpit under wraps.

This page: An APA-100 ground power unit on a Ural-4320 chassis hooked up to a Tu-160.

121st GvTBAP Tu-160s sport characteristic fin flashes in Russian flag colours.

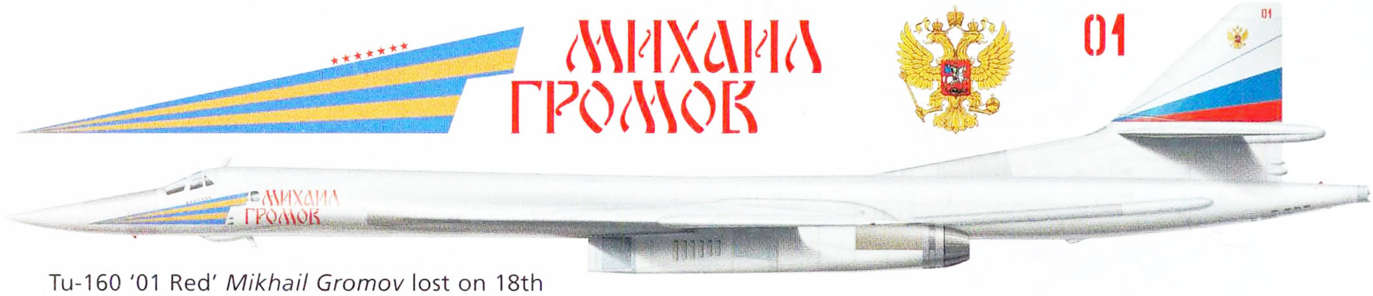
Tu-160 '03 Red' *Pavel Taran* taxies at Engels on a bleak day.



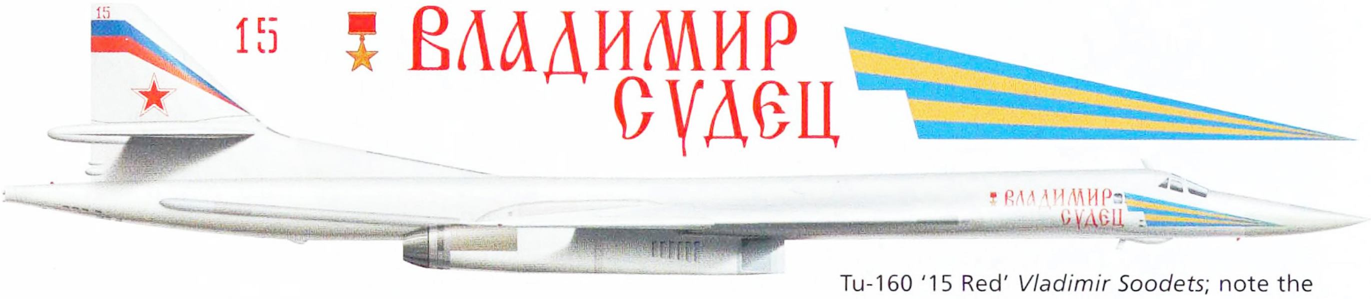


The crew of Tu-160 '01 Red' that crashed fatally on 18th September 2003. Aircraft captain Guards Lt.-Col. Yuriy Mikhailovich Deyneko graduated from the Tambov Military Pilot College (VVAUL), class of 1984, and from the Air Force Academy named after Yuriy A. Gagarin, class of 1996. He had the Military Pilot 1st Class rating.
Total time 1,296 flight hours.

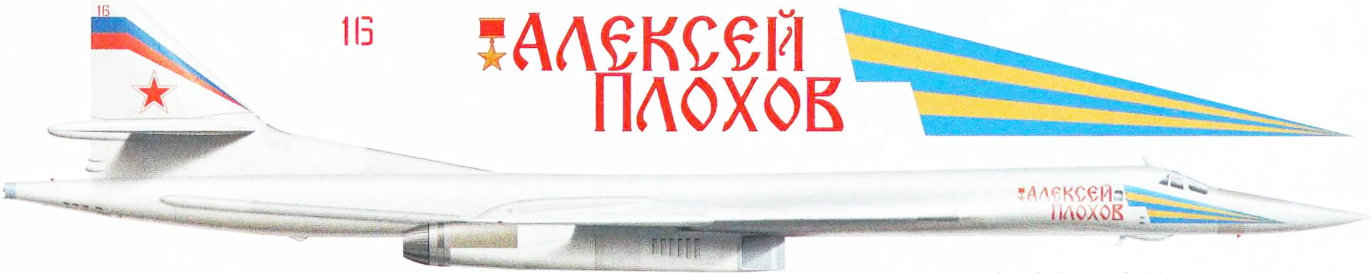
Co-pilot Guards Maj. Oleg Nikolayevich Fedusenko (right) graduated from the Tambov VVAUL, class of 1990, and was listed as a co-pilot on the regiment's staff. He had the Military Pilot 2nd Class rating.
Total time 579 flight hours.



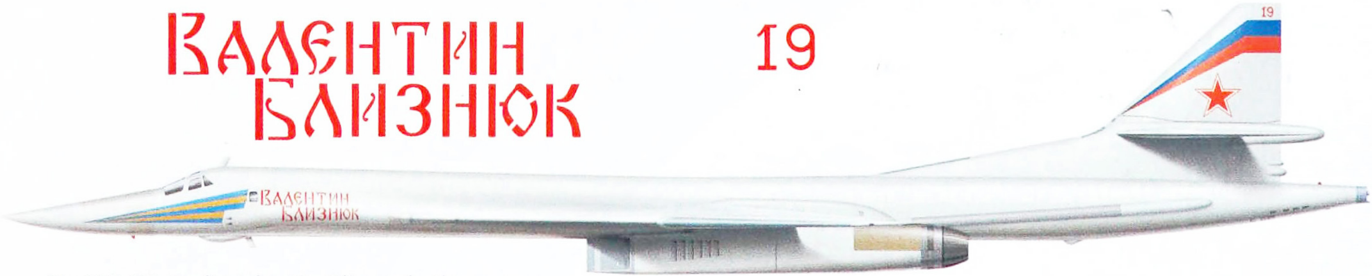
Tu-160 '01 Red' *Mikhail Gromov* lost on 18th September 2003; note the 7 mission markers



Tu-160 '15 Red' *Vladimir Soodets*; note the current style of the tail colours and 'whiskers'



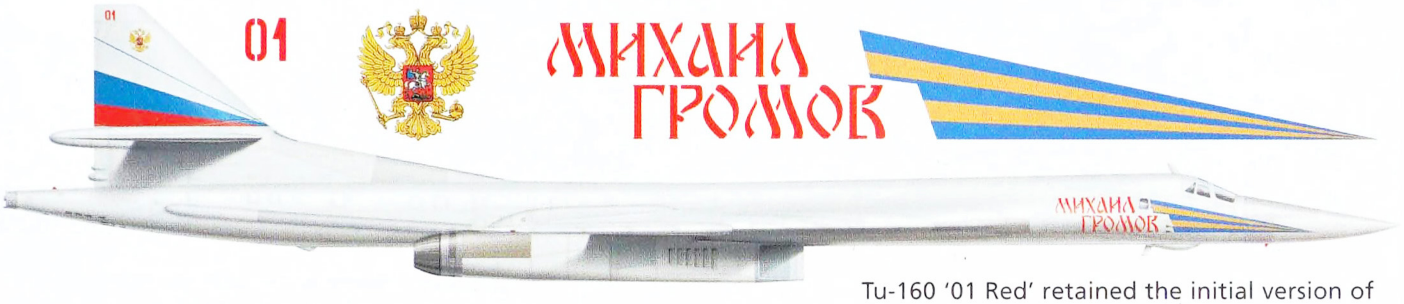
Tu-160 '16 Red' *Aleksey Plokhov*; note that the typeface of the names varies



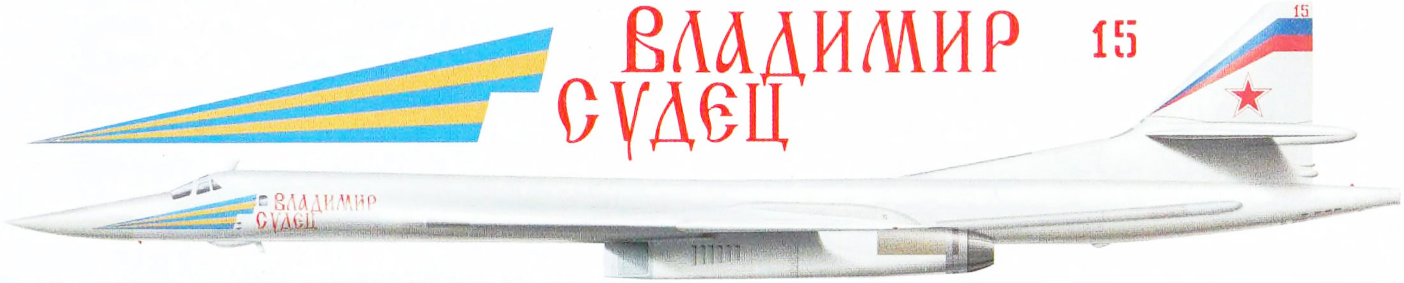
Tu-160 '19 Red' *Valentin Bliznyuk*; the name is again applied in a different typeface

Navigator Guards Maj. Grigoriy Afanas'yevich Kolchin (left) graduated from the Chelyabinsk Military Navigator College (VVAUSh), class of 1980, and was the regiment's chief navigator. He had the Sniper Pilot rating. Total time 2,150 flight hours.

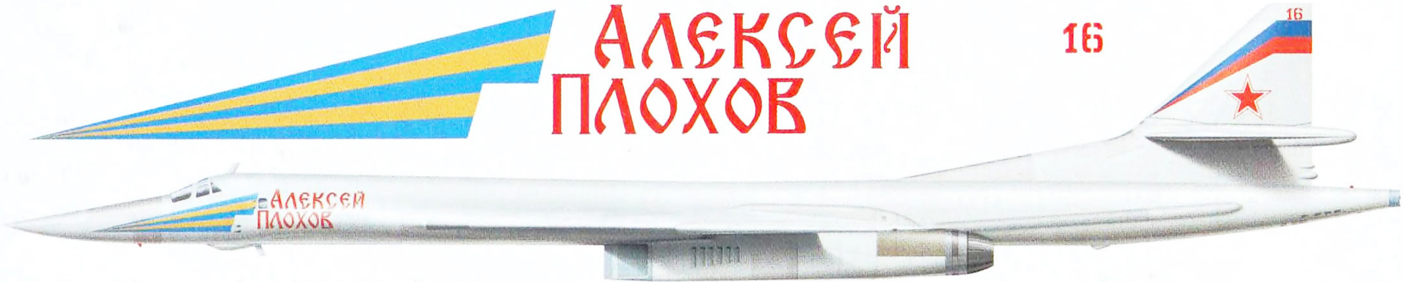
Co-navigator (weapons systems operator) Guards Maj. Sergey Mikhailovich Sukhorookov graduated from the Chelyabinsk VVAUSh, class of 1993, and was listed as an aircraft navigator on the regiment's staff. Total time 510 flight hours.


01
01
МИХАИЛ
ГРОМОВ
МИХАИЛ
ГРОМОВ

Tu-160 '01 Red' retained the initial version of the tail colours with the Russian coat-of-arms


ВЛАДИМИР
СУДЕЦ
15
15
ВЛАДИМИР
СУДЕЦ

Port side view of Tu-160 '15 Red'; note that the style of the tactical codes varied, too


АЛЕКСЕЙ
ПЛОХОВ
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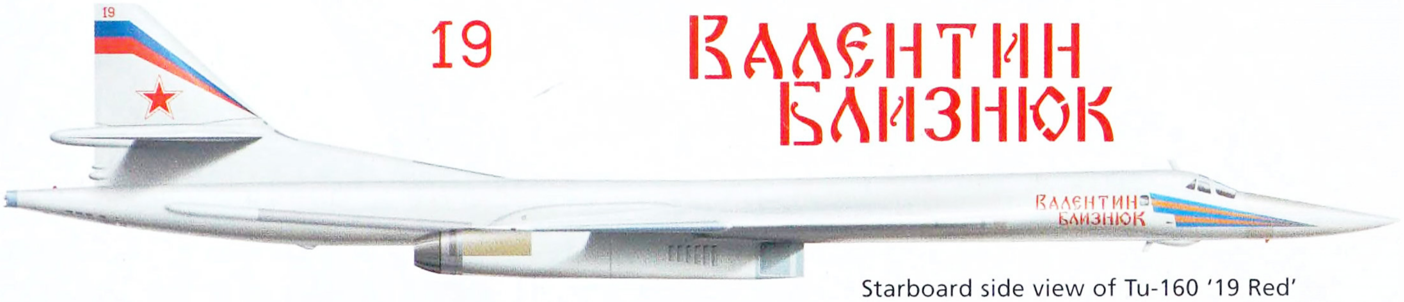
16
АЛЕКСЕЙ
ПЛОХОВ

Port side view of Tu-160 '16 Red'


19
19
ВАЛЕНТИН
БЛИЗНЮК
ВАЛЕНТИН
БЛИЗНЮК

Starboard side view of Tu-160 '19 Red'

19
ВАЛЕНТИН БЛИЗНЮК

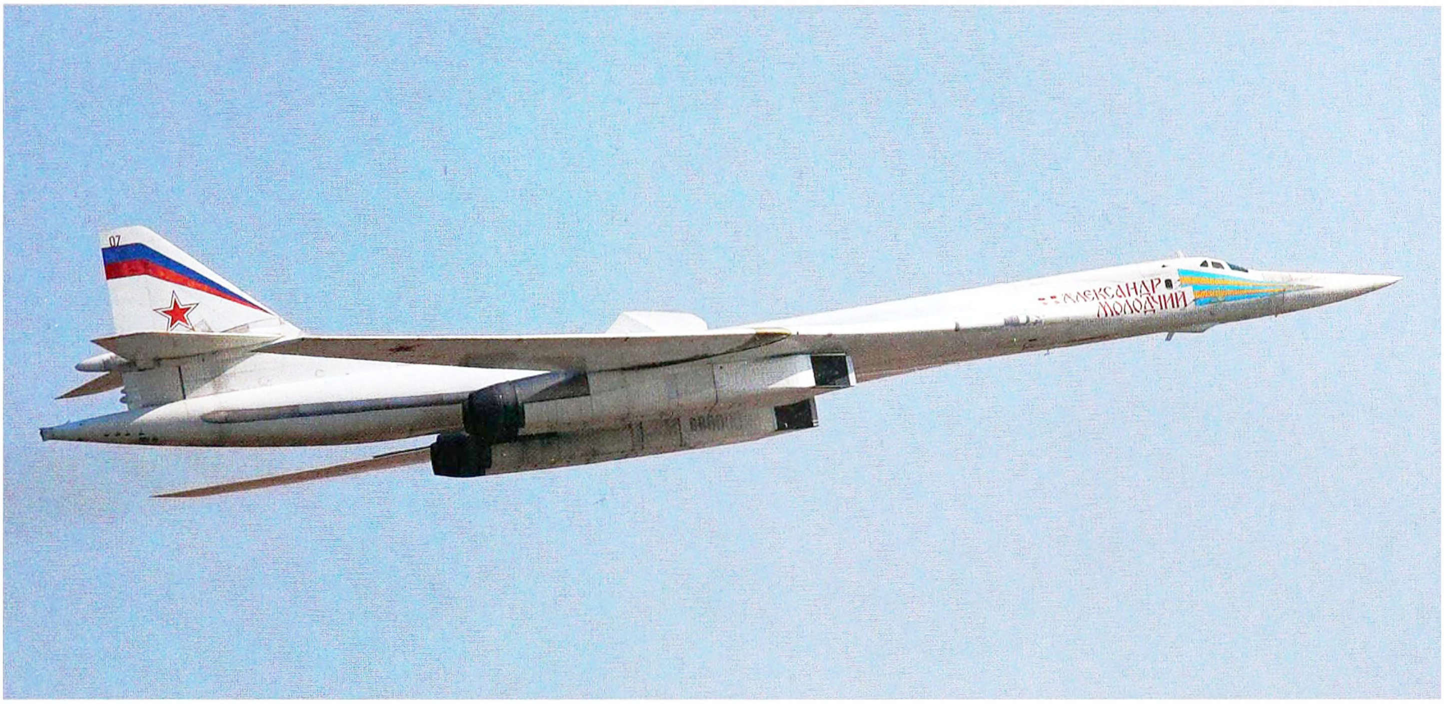
Impeccable looking '19 Red' *Valentin Bliznyuk* seen during a high-speed dash.

enough *Blackjacks* to equip two full squadrons. As early as 1998 Squadron 3 disbanded and its *Crusty-Bs* were passed on to other units. In the second half of the year Squadrons 2 and 3 were re-formed with the personnel and hardware of the 182nd TBAP which had moved in from Mozdok, Ingushetia. In May the two squadrons began receiving Tu-95MS missile carriers, the *Blackjacks* being concentrated in Squadron 1; this was still the unit's structure as of 1st January 2000.

NATO's bombardment of the former Yugoslavia (Operation *Allied Force*) gave a powerful impetus both to the Long-Range Aviation's combat training and to the Russian-Ukrainian talks on the issue of transferring strategic aircraft to Russia. The arrival of eight second-hand Tu-160s from the Ukraine, together with the delivery of one more brand-new *Blackjack* in 2000, made it possible to form at long last a complete regiment equipped with Russia's most modern and

'10 Red' *Nikolay Kuznetsov* formates with the camera ship in low-speed flight.

10
НИКОЛАЙ КУЗНЕЦОВ

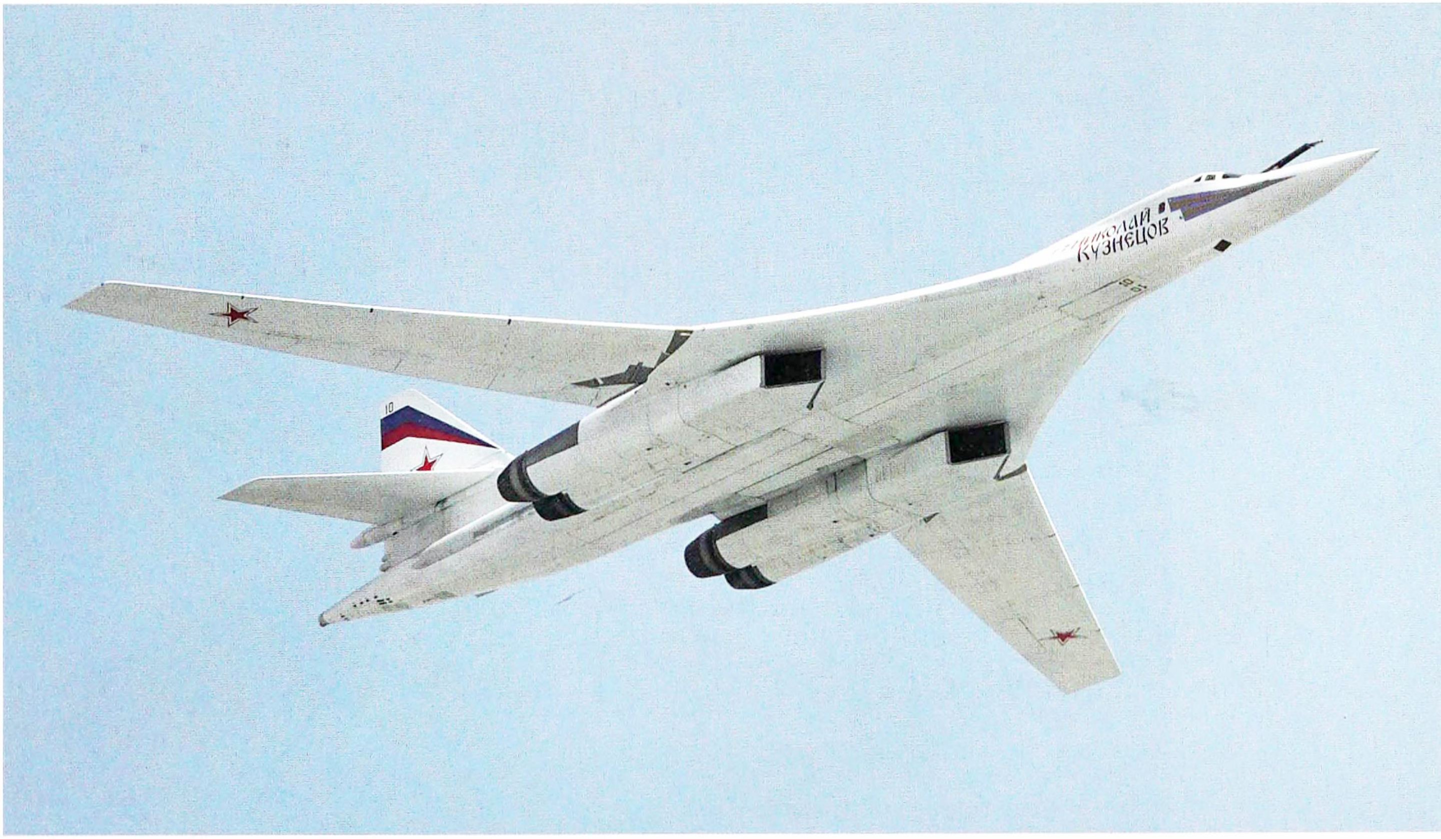


'07 Red' *Aleksandr Molodchiy* makes a flypast with the wings at maximum sweep.

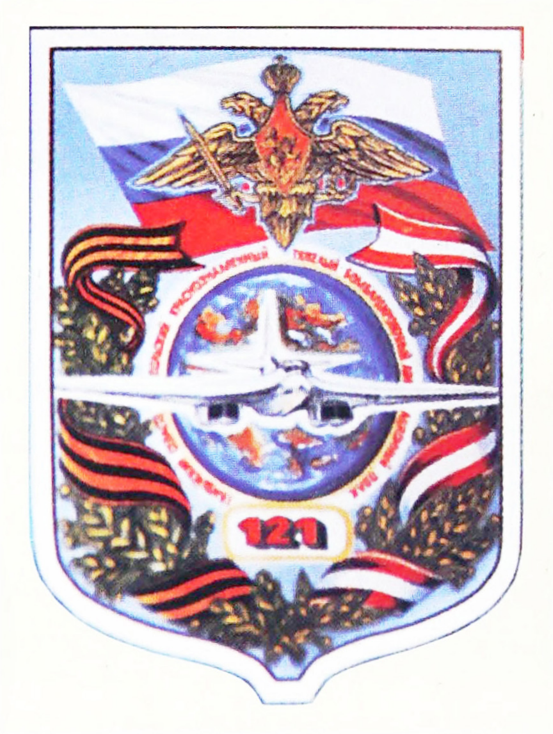
sophisticated strategic aircraft. Since 1st September 2000 the 121st GvTBAP has been a two-squadron regiment equipped entirely with Tu-160s; all of its *Bear-Hs* have been transferred to the 184th GvTBAP which was re-established at Engels (see below).

As noted more than once previously, the mid/late 1990s were hard times for the Russian Air Force at large and the Long-Range Aviation. The crews' flight time per annum dropped to an all-time low; nevertheless, that was the time when the Air Force conducted a series of large-scale exercises in which new combat tactics and weapons application techniques were verified. The joint exercise of Russia's strategic nuclear forces held on 21st-22nd June 1994 included the launch of a Kh-55SM extended-range cruise missile by a Tu-160.

In 1996 a Tu-160 crewed by Guards Col. A. N. Bobrov, Guards Maj. I. I. Urazayev, Guards Lt.-Col. V. I. Adamov and Guards Maj. M. A. Krasnov made a practice launch of an



'10 Red' displays its IFR probe. The insides of the air intakes are coated with graphite-based paint.

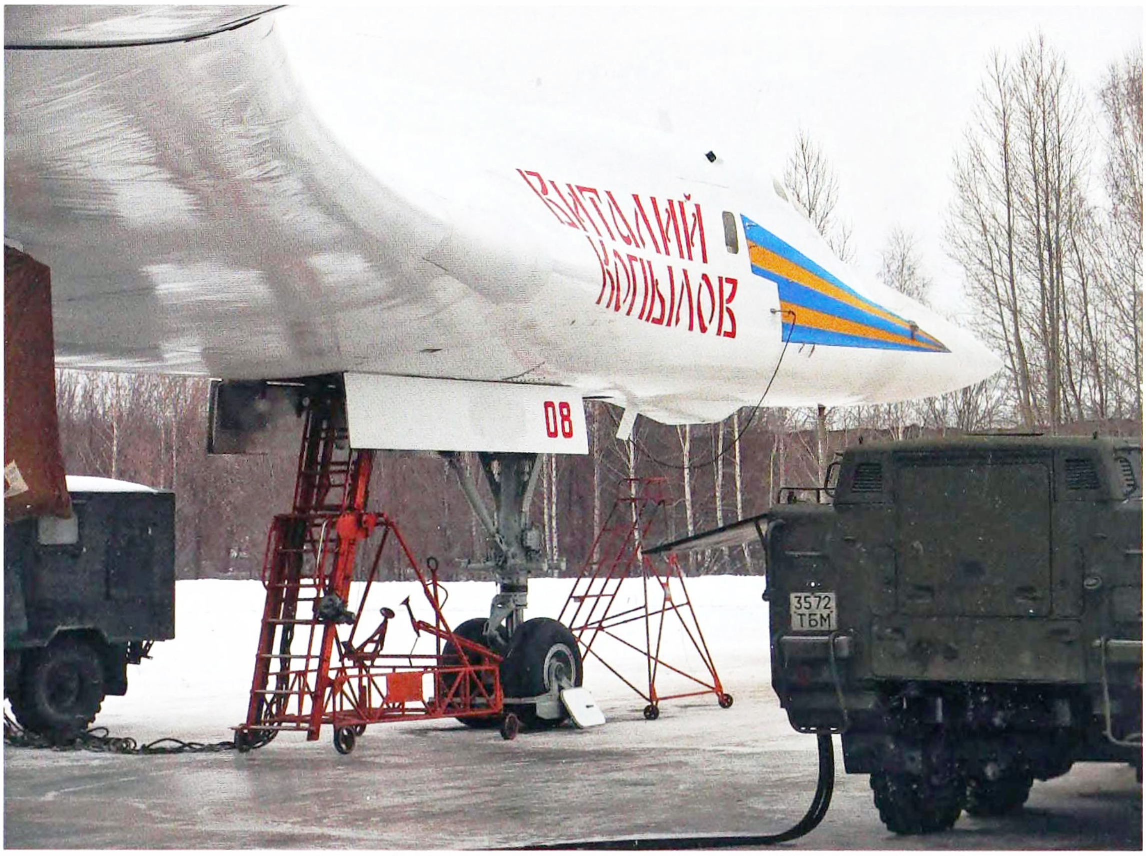


A decorative pennant of the 121st GvTBAP.

ALCM in the course of Exercise *Redoot-96*. In the Spring of 1998 a pair of Tu-160s made a sally towards the North Pole.

On 21st-26th June 1999 the 121st GvTBAP again participated in a strategic nuclear forces exercise (*Zapad-99*). On the night of 26th June a pair of Tu-160s and a pair of Tu-95MSs departed from Engels-2 AB, heading north. The *Blackjacks* were captained by Guards Lt.-Col. Igor' V. Skitskiy and Guards Lt.-Col. Vladimir Popov. After reaching a predesignated point over the Arctic Ocean the bombers parted. The two *Blackjacks* turned south-west, passing along the entire Norwegian coastline to the North Sea and making simulated missile launches. Then one of the crews proceeded to a target range in southern Russia where an actual launch of a Kh-55SM missile was made. The Tu-160s then made a U-turn and headed back to Engels; they stayed airborne for 12 hours on that occasion without in-flight refuelling. The Western media immediately raised hell, claiming that 'Moscow was planning a nuclear attack on the USA' or that 'Russian jets had intruded into Icelandic airspace'.

February 2001 again saw a pair of Tu-160s 'go around the corner', following the Scandinavian coastline towards the British Isles and turning back just 150 km (93 miles) short. The 12-hour mission was flown by the 121st GvTBAP's best-trained crews headed by Guards Lt.-Col. Yuriy M. Deyneko and Guards Lt.-Col. Igor' V. Skitskiy. En route the bombers were intercepted and escorted by Royal Norwegian Air Force Lockheed Martin F-16As and Royal Air Force Panavia Tornado F.3s but, as Skitskiy recalls, the NATO fighters did not make any provocative or dangerous manoeuvres.



The Russian Air Force's youngest Tu-160, '08 Red' *Vitaliy Kopylov*, has its hydraulics checked by a UPG-300 vehicle at Kazan'-Borisoglebskoye.

08
ВИТАЛИЙ
КОПЫЛОВ
08

Tu-160 '08 Red' shows off its sleek lines on take-off.

A long break followed, and it was not until October 2002 that *Blackjacks* again appeared over the Arctic Ocean, the Greenland Gap and the Norwegian Sea. Again the aircraft were captained by Deyneko and Skitskiy; this time they made a maximum gross weight take-off at night. In this flight Deyneko's crew made a practice launch of a Kh-55SM ALCM at a target range.

Generally, 2002 was a year of change for the Russian Long-Range Aviation. The practice missions became more frequent. In June the 121st GvTBAP Tu-160s made the first 'dry runs' with IL-78 tankers; in September the crews captained by Guards Col. A. N. Bobrov and Guards Col. Aleksey R. Serebryakov (the regiment CO) performed the first actual refuellings. As the results of the year's flight training were drawn up, the 121st GvTBAP was deemed to be the best unit in the Long-Range Aviation.

In August 2003 the then Russian Minister of Defence Sergey B. Ivanov was given a ride from Engels to the Russian Far East in the left-hand seat of Tu-160 '07 Red' *Aleksandr Molodchiy*. The aircraft was flown by 22nd TBAD CO Maj.-Gen. Anatoliy D. Zhikharev from the right-hand seat.

A tragic page in the regiment's history was written in the Autumn of 2003. On 18th September Tu-160 '01 Red' *Mikhail Gromov* crashed, killing one of the unit's best crews – captain Guards Lt.-Col. Yuriy M. Deyneko, co-pilot Guards Maj. Oleg N. Fedusenko, navigator Guards Maj. Grigoriy A. and WSO Guards Maj. Sergey M. Sukhorookov. The aircraft, which was one of the first Tu-160s to be christened, was making a check flight following an engine change. The day's programme had been completed and the aircraft was returning to base when the airframe structure failed

121st GvTBAP Deputy CO Col. Andrey Senchurov holds a symbolic key to Tu-160 '08 Red' at the official handover ceremony at KAPO on 29th April 2008.

Russian Air Force Tu-160 fleet details

Tactical code	Name	Remarks
01 Red	Mikhail Gromov	Crashed 18-9-2003. Mikhail M. Gromov (1899-1985) was a famous Soviet test pilot after whom the Flight Research Institute (LII) is named
02 Red	Vasiliy Reshetnikov	Maj.-Gen. Vasiliy V. Reshetnikov, HSU (born 1919) was a bomber pilot in the Great Patriotic War and, in 1969-1980, Commander of the DA
03 Red	Pavel Taran	Lt.-Gen. Pavel A. Taran, twice HSU (1916-2005) was a bomber unit CO in the Great Patriotic War
04 Red	Ivan Yarygin	Ivan S. Yarygin (1948-1997) was a famous Soviet/Russian wrestler who won gold medals at the 1972 and 1976 Olympic Games
05 Red	Aleksandr Golovanov	Air Chief Marshal Aleksandr Ye. Golovanov (1904-1975) commanded the Soviet long-range bomber arm in 1944-48
06 Red	Il'ya Muromets	A Russian epic hero; 'Muromets' indicates his origins from the town of Murom. '05 Red' was also originally named *Il'ya Muromets*
07 Red	Aleksandr Molodchiy	Lt.-Gen. Aleksandr I. Molodchiy (1920-2002) was a bomber pilot in the Great Patriotic War, earning two HSU titles
08 Red	Vitaliy Kopylov	Vitaliy Ye. Kopylov (1926-1995) was the director of the KAPO aircraft factory in 1974-1994
10 Red	Nikolay Kuznetsov	Soviet aero engine designer Nikolay D. Kuznetsov (1911-1995)
11 Red	Vasiliy Sen'ko	Col. Vasiliy V. Sen'ko (1921-1984) was the sole Long-Range Aviation navigator/bomb-aimer to become twice HSU in the Great Patriotic War
12 Red	Aleksandr Novikov	Air Marshal Aleksandr A. Novikov, twice HSU (1900-1976), was C-in-C of the Soviet Air Force in 1943-46
15 Red	Vladimir Sudets	Air Marshal Vladimir A. Sudets, HSU (1904-1981) commanded various long-range bomber units in the Great Patriotic War
16 Red	Aleksey Plokhov	Aleksey A. Plokhov (HSU) was a bomber pilot in the Great Patriotic War
17 Red	Valeriy Chkalov	Valeriy P. Chkalov, HSU (1904-1938) was a legendary Soviet test pilot
19 Red	Valentin Bliznyuk	Valentin I. Bliznyuk (born 1928) is the chief designer of the Tu-160

suddenly as the bomber was descending from 2,100 to 1,200 m (from 6,890 to 3,940 ft); the cause could not be determined. Next, the crew got consecutive fire warnings for three of the four engines and warnings of hydraulic, electric and control system failures. This avalanche of malfunctions developed within just 12 seconds and completely unexpectedly, without any prior indications of anything untoward.

Reacting to this emergency with utmost professionalism, the captain acted calmly; he engaged the fire suppression system and sought to regain control of the aircraft. Then, realising the aircraft was doomed and the altitude was diminishing rapidly, Deyneko ordered the crew to prepare for ejection and initiated the ejection sequence, being the last to abandon ship. The ejection seats functioned as they should, but the low altitude and high sink rate, together with another explosion on the stricken bomber whose fireball engulfed the crewmen, left them no chances of survival.

Analysis of the cockpit voice recorder readouts showed that Lt.-Col. Deyneko had taken the only correct decision. There had been no panic on board and the crew had fought to the last to save the aircraft.

Guards Lt.-Col. Yuriy M. Deyneko received the Hero of Russia title posthumously; the other crewmen were awarded the Bravery Order posthumously. In September 2004, a year after the tragedy, a monument was consecrated at the crash site. Of course the entire Tu-160 fleet had been grounded after the crash but the ban was lifted after the cause of the accident had been finally established.

On 16th August 2005 the then President of Russia Vladimir V. Putin made a flight in the captain's seat of Tu-160 '03 Red' *Pavel Taran*. The flight included missile launches, in-flight refuelling and a supersonic dash; details of this flight are given in Chapter 6.

On 29th April 2008 a delivery ceremony took place at Kazan'-Borisoglebskoye, KAPO's factory airfield, during which one more brand-new Tu-160 was formally handed over to the Russian Air Force. The aircraft was immediately christened *Vitaliy Kopylov* in memory of the factory's former director. On 9th August 2008 an operational Tu-160, '10 Red', was named *Nikolay Kuznetsov* after the designer of the NK-32 engines powering the *Blackjack*.

On 10th September 2008 two 121st GvTBAP Tu-160s made a trans-Atlantic flight from Engels to El Libertador AB, Venezuela, that included a technical stop at the airbase in Olenegorsk (Murmansk Region). This was the type's first visit abroad and the first occasion when Russian strategic bombers used a foreign airbase for operational purposes, not on a goodwill visit. While in Venezuela the *Blackjacks* made a series of training flights over the Caribbean before returning to Engels on 19th September. This mission is more fully descrived in Chapter 7.

Over the years the 121st GvTBAP was commanded by the following people:

Guards Lieutenant-Colonel V. D. Podtykalov (from 1989);
Guards Colonel Anatoliy D. Zhikharev (from 1992);
Guards Colonel A. N. Bobrov (from 1996);
Guards Colonel Aleksey R. Serebryakov (from 2000).

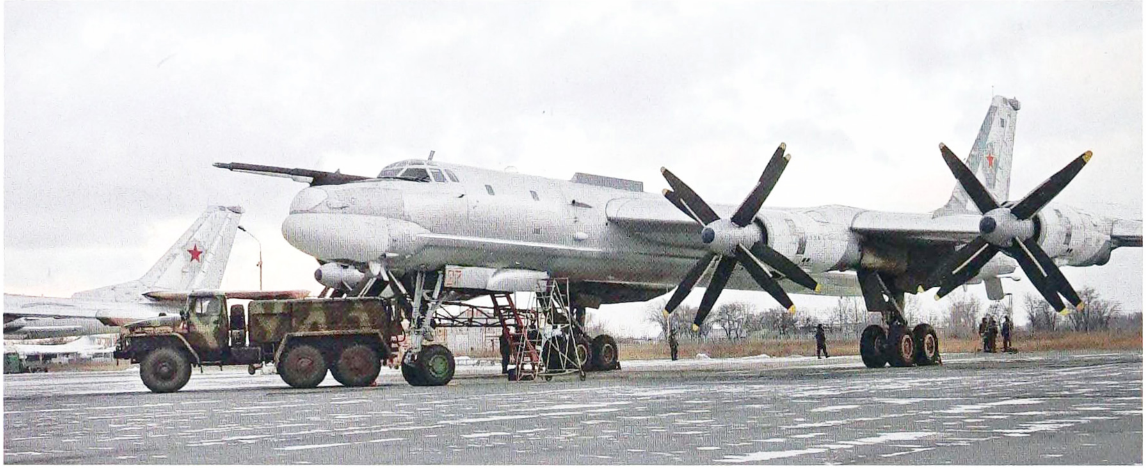
184th TBAP Tu-95MS '21 Red' (ex-31) begins its take-off run at Engels.

184th *Poltavsko-Berlinskiy* Red Banner GvTBAP (Lenin Order)

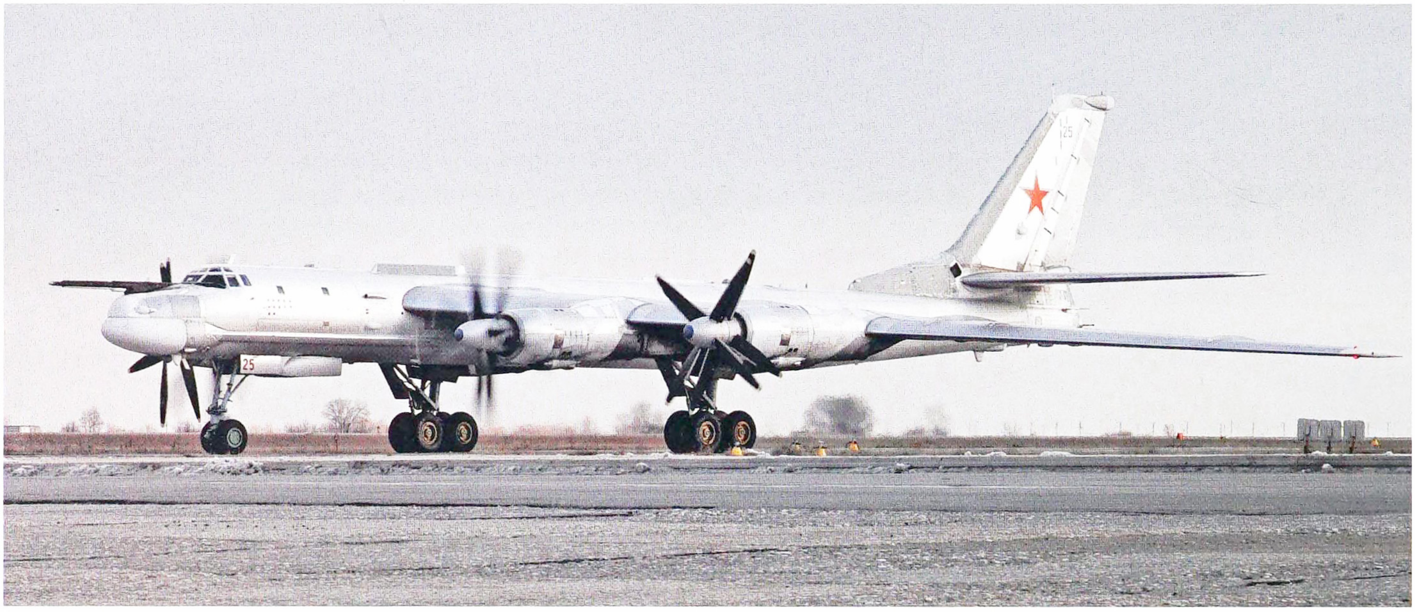
The 184th TBAP is the youngest regiment in the Russian Air Force's Long-Range Aviation. Actually this regiment could have been one of the *oldest* in the Air Force. The choice of the unit's number is no matter of chance: in the Soviet Air Force there had already been an identically numbered heavy bomber regiment – the 184th *Poltavsko-Berlinskiy* GvTBAP decorated with the Red Banner and Lenin Orders. Few units and formations in the Soviet Armed Forces were so merited. However, after the disintegration of the USSR the 184th GvTBAP

The 184th TBAP flight line with nine Tu-95MSs visible. The vehicles are APA-5 ground power units on Ural-375D chassis.

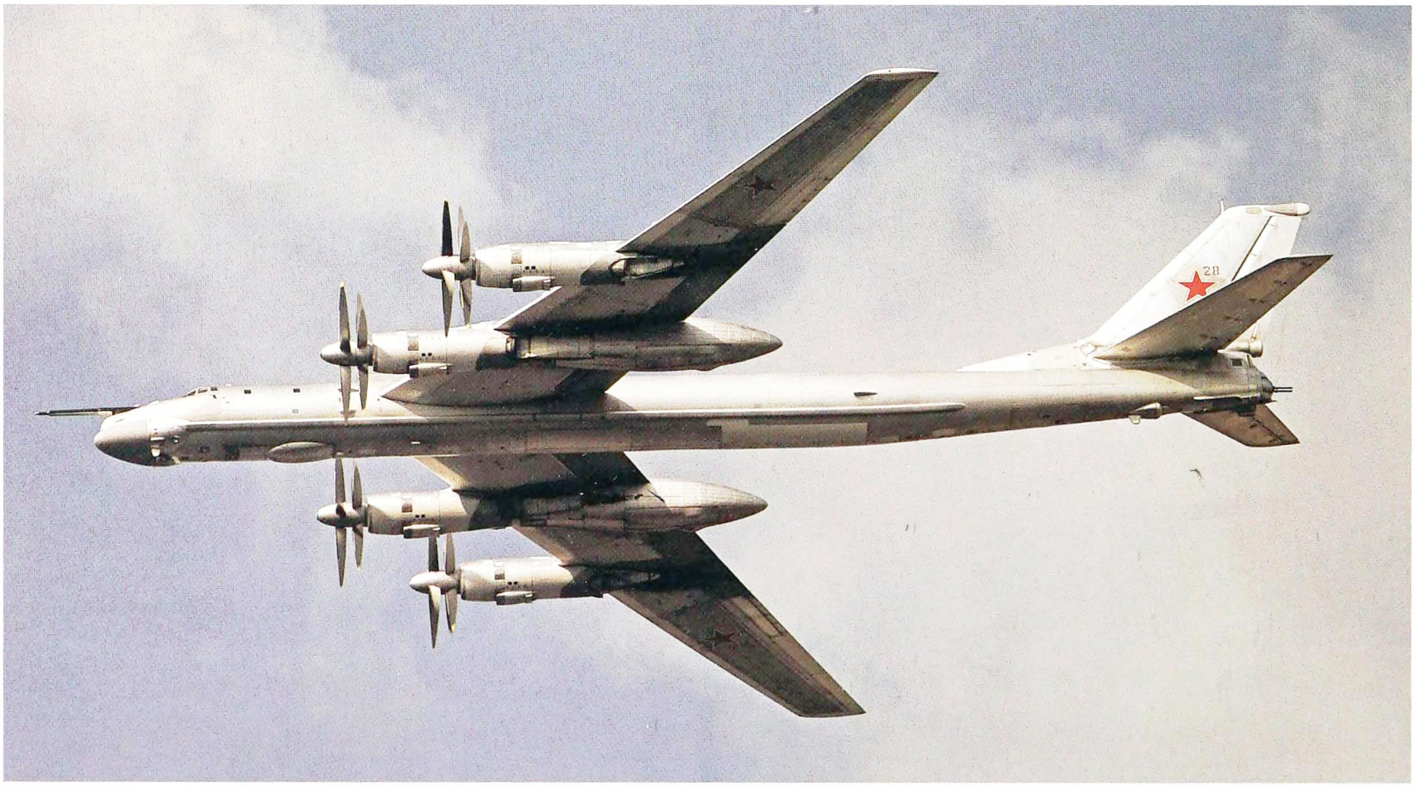
Tu-95MSs '27 Red' and '28 Red' are former Ukrainian Air Force/1006th TBAP machines.



Tu-95MS '25 Red' taxies in after a training sortie; note the 12 mission markers.



'28 Red' shows its classic lines in a low flypast.



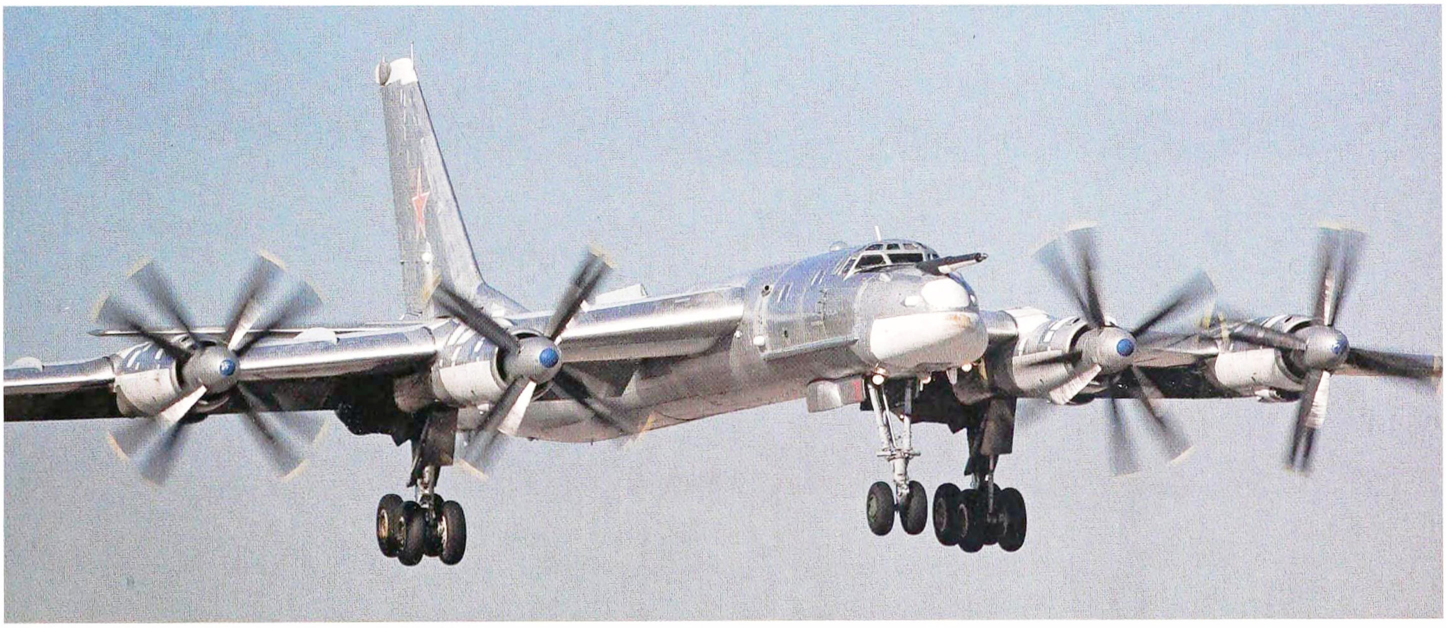
home-based at Priluki, Chernigov Region, was retained by the newly-independent Ukraine. The regiment was the first in the Soviet Air Forces to master the Tu-160 strategic missile carriers.

In post-war years the regiment consecutively adopted the aircraft types operated by the Soviet Long-Range Aviation: the Ilyushin IL-4, North American B-25 Mitchell (which was an interim type for the Tu-4), Tu-4, Tu-16 and Tu-22M3. In April 1987 the first Tu-160 strategic missile carrier arrived in Priluki.

After the demise of the USSR the formation of the Russian regiment with this number was also connected with the Ukraine. As noted earlier, since 1998 two out of three squadrons of the 121st GvTBAP stationed at Engels-2 AB had been operating Tu-95MS strategic missile carriers. The delivery of eight ex-Ukrainian Tu-160s made it possible allowed to transform the 121st regiment to a single aircraft type, and a new 184th TBAP – the Russian one – was created on the basis of the former unit's Squadrons 2 and 3.

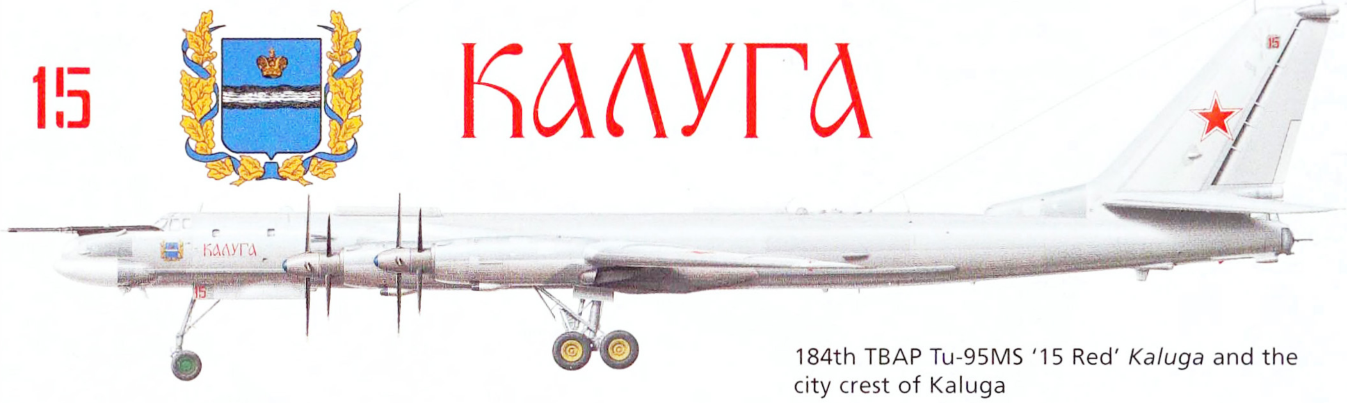
Officially the 184th was established at Engels according to the directives of the 1st Deputy Minister of Defence of Russia dated 24th February 2000, the General HQ of the Air Force dated 4th March 2000 and the Commander of the 37th (Strategic) Air Army dated 13th March 2000. Formation of the regiment began in earnest in July 2000 and was completed by 1st September that year. Many of the airmen and technicians who had served earlier in 182nd GvTBAP (the latter moved to Ookraïnka AB) stayed at Engels to serve with the new unit.

From the late 1990s there has been a tradition in the regiment to name the Tu-95MS

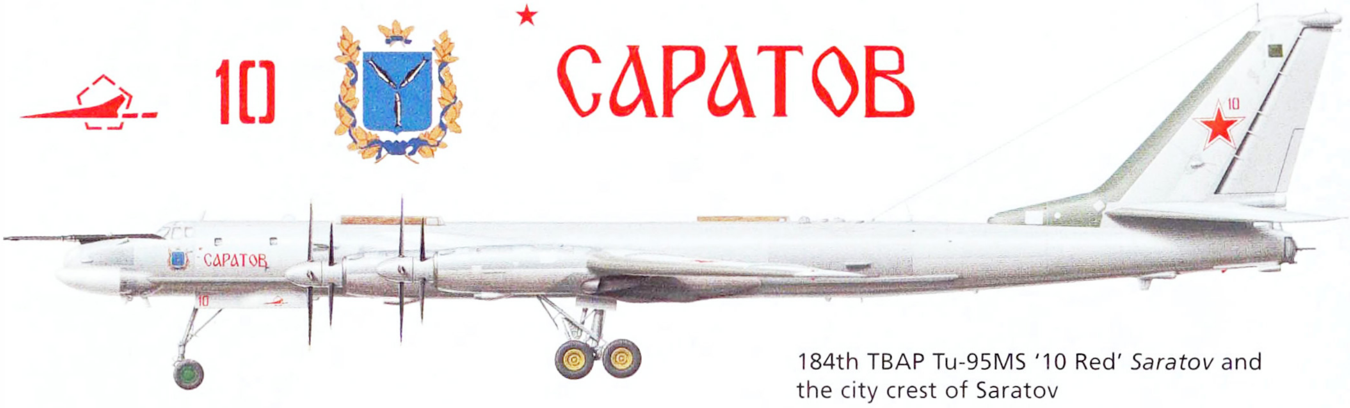


The 184th TBAP *Bear-Hs* have blue-coloured spinner tips.

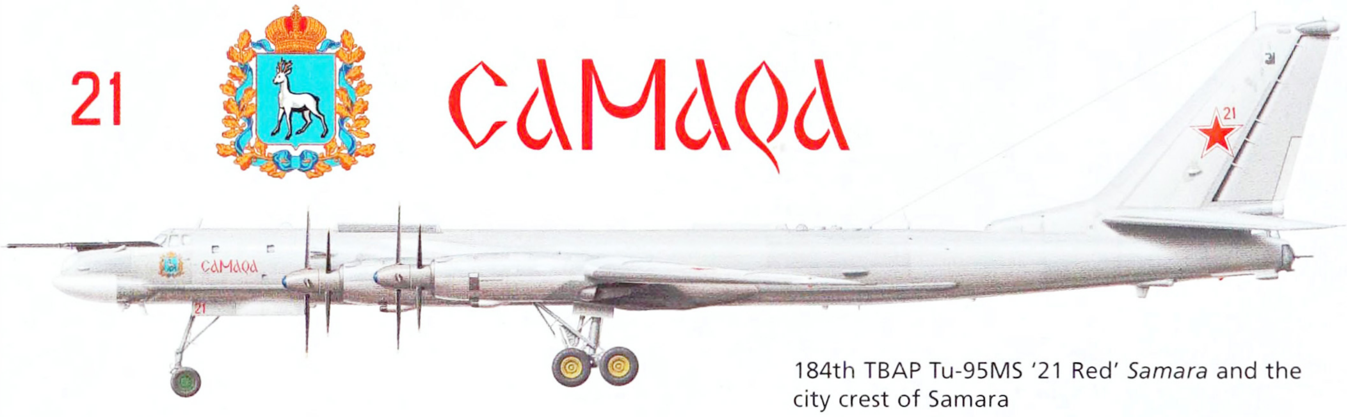
A Tu-95MS seen seconds before touching down at Engels.



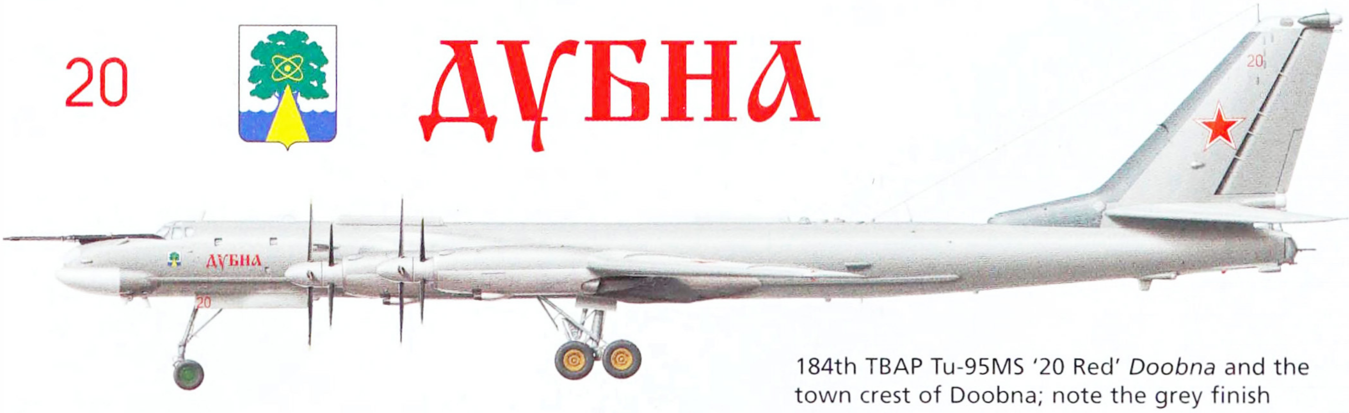
184th TBAP Tu-95MS '15 Red' *Kaluga* and the city crest of Kaluga



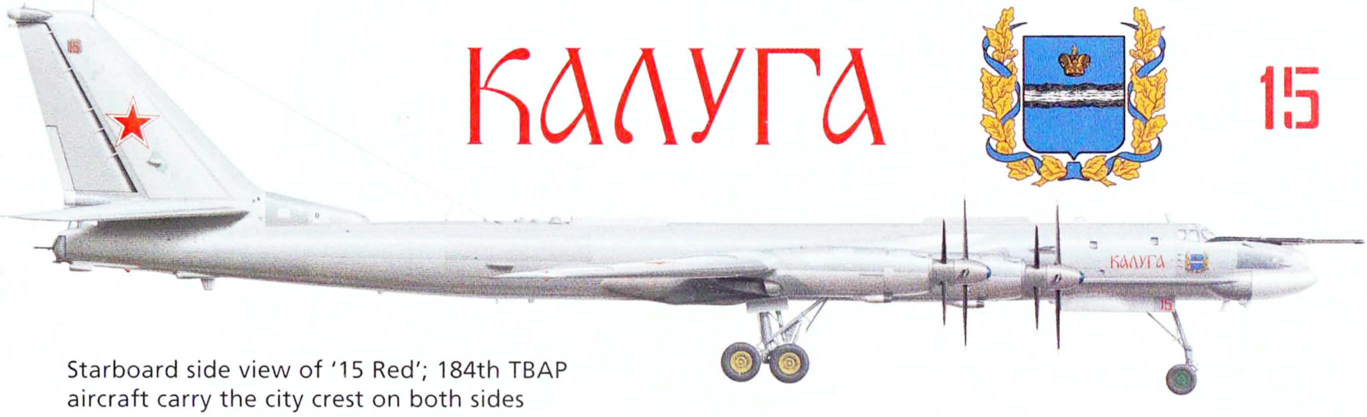
184th TBAP Tu-95MS '10 Red' *Saratov* and the city crest of Saratov



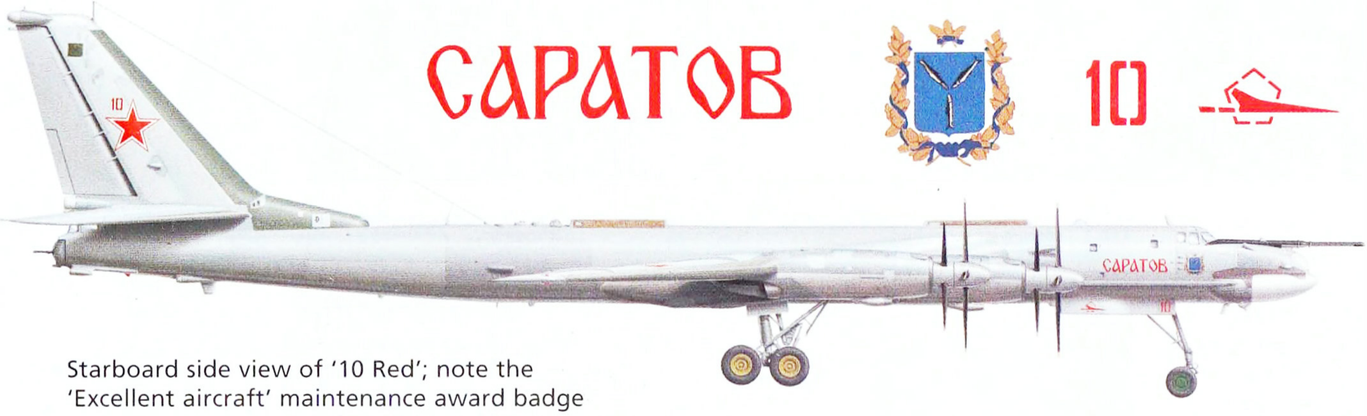
184th TBAP Tu-95MS '21 Red' *Samara* and the city crest of Samara



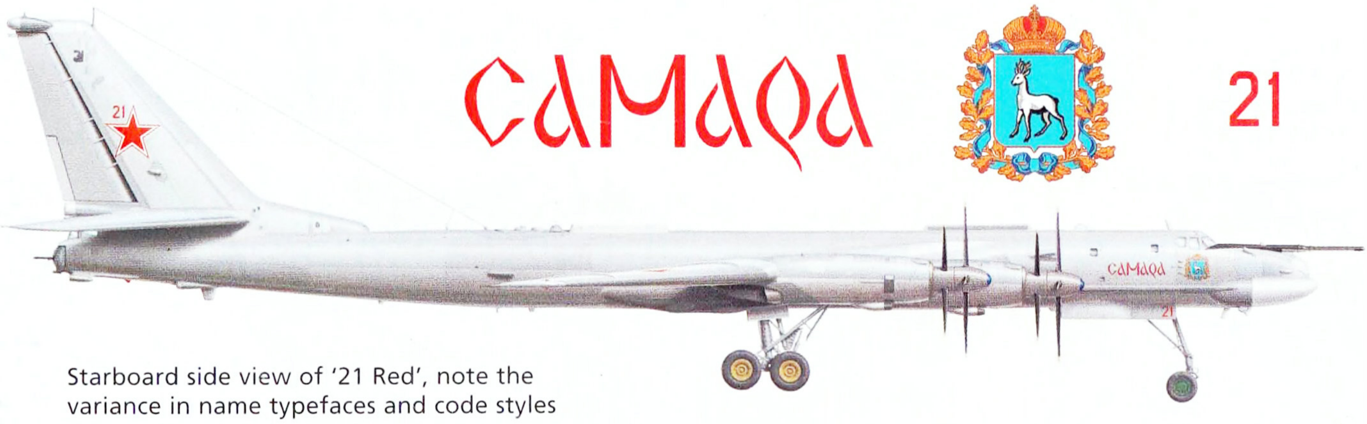
184th TBAP Tu-95MS '20 Red' *Doobna* and the town crest of Doobna; note the grey finish



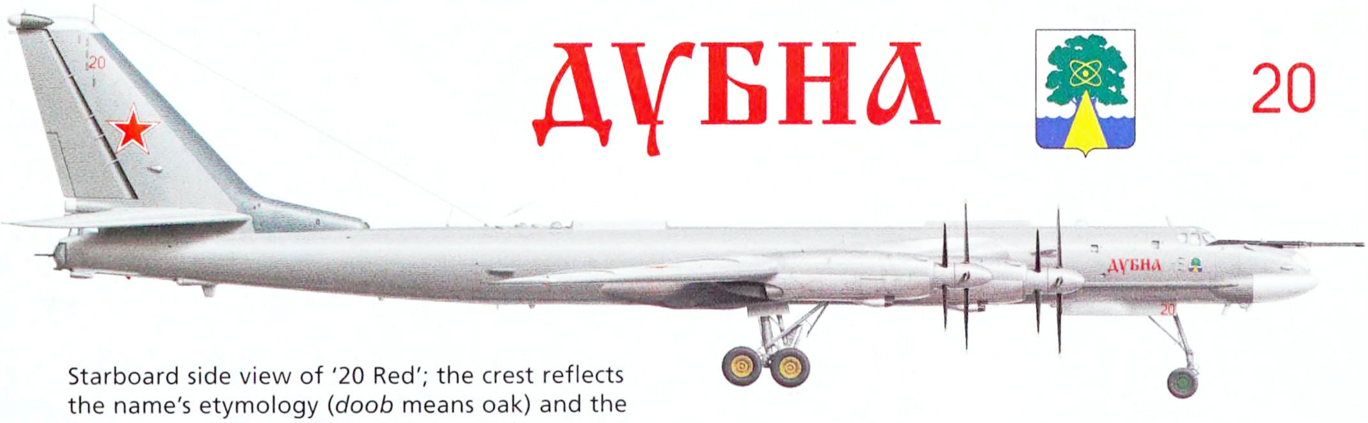
Starboard side view of '15 Red'; 184th TBAP aircraft carry the city crest on both sides



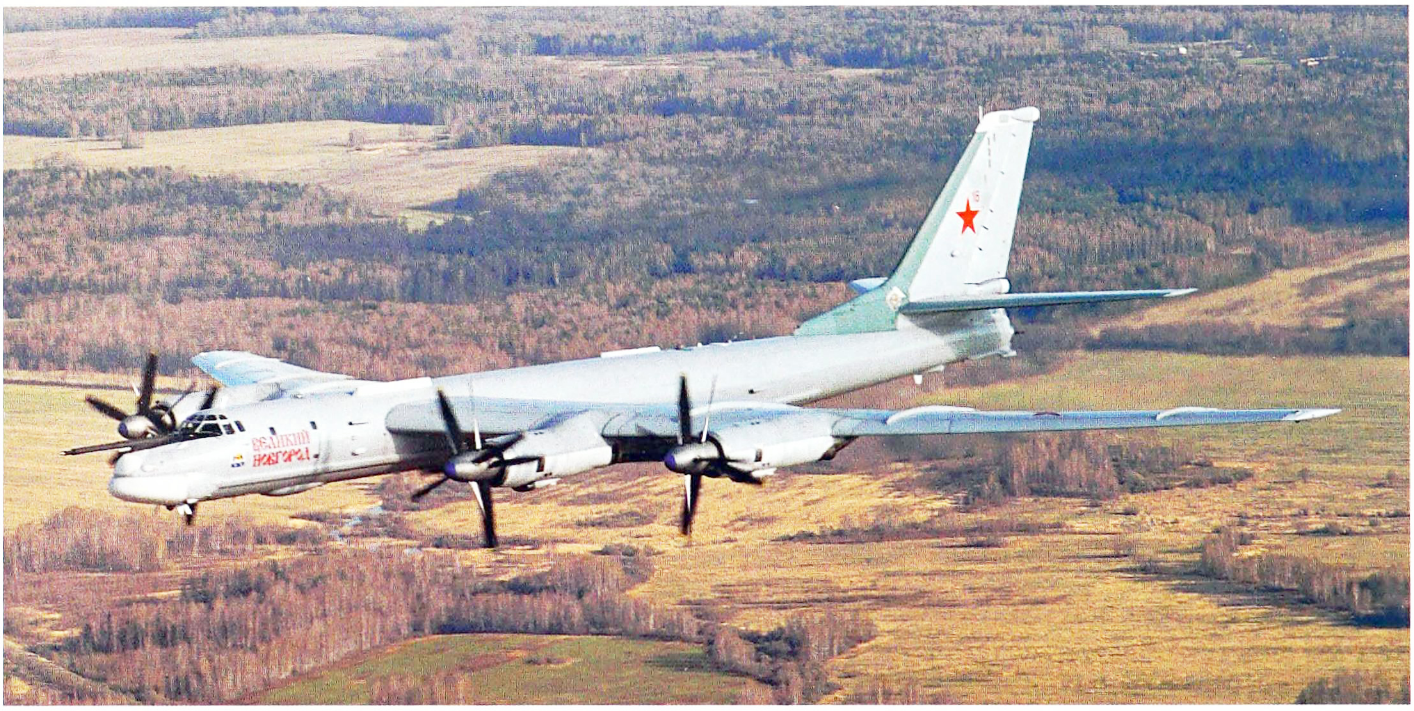
Starboard side view of '10 Red'; note the 'Excellent aircraft' maintenance award badge



Starboard side view of '21 Red', note the variance in name typefaces and code styles



Starboard side view of '20 Red'; the crest reflects the name's etymology (*doob* means oak) and the town's association with nuclear research

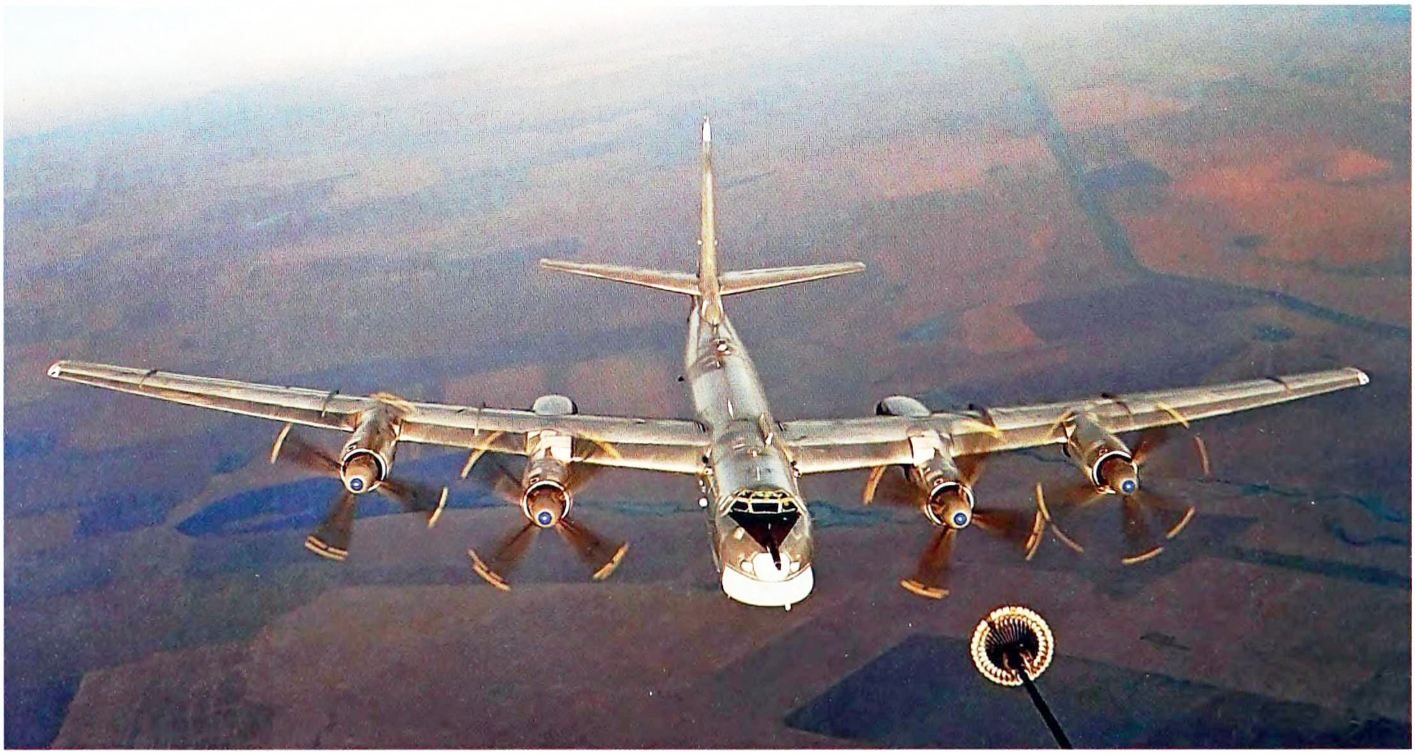


'16 Red' *Velikiy Novgorod* is one of several 184th TBAP Tu-95MSs painted light grey instead of the usual silver finish.

184th TBAP Tu-95MSs with individual names

Tactical code	Individual name	Remarks
12 Red	Moskva	Moscow, the capital of the Russian Federation
10 Red	Saratov	A regional centre in southern Russia
15 Red	Kaluga	A regional centre in central Russia
11 Red	Vorkuta	A city in north-western Russia
16 Red	Velikiy Novgorod	'Great Novgorod', a regional centre in north-western Russia. The 'Great' prefix restored in 1999 distinguishes it from Nizhniy Novgorod ('Lower Novgorod'), formerly Gor'kiy, located 'down south' on the Volga River
20 Red	Doobna	A town in the Moscow Region known for its nuclear research centre
21 Red	Samara	A regional centre in southern central Russia

A Tu-95MS formates with an IL-78 tanker in the afternoon light.



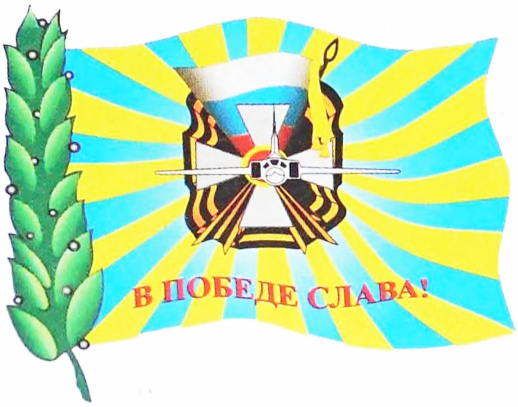
strategic missile carriers after Russian cities which are inseparably linked with the history of the Long-Range Aviation.

Since 2001 the regiment has taken part in nearly all major Russian command/staff exercises, becoming one of the most active in the DA. It made its mark during the exercise conducted under the direction of the Chief of the General Staff of the Russian Federation in February 2001. During the exercise the crews captained by Lt.-Col. A. M. Pechatnov and Maj. V. A. Kostikov performed practice launches of Kh-55 cruise missiles. That same year the regiment twice took part in military hardware displays. In 2002, 184th TBAP aircraft operated from forward operating locations (auxiliary airfields) and also acted as 'adversaries' to check out the Russian air defence system; this involved setting up active ECM, and actual launches of cruise missiles were carried out twice. The May 2003 exercise during which the Tu-160s of the 121st GvTBAP and the Tu-95MSs of the 184th TBAP flew south to the Arabian Sea instead of the usual northern route 'around the corner' created a worldwide commotion. The crews headed by Lt.-Col. V. N. Kuznetsov, Lt.-Col. I. V. Gorlov, Lt.-Col. Ye. I. Dmitriyev and Lt.-Col. V. S. Zemnukhov took part in the exercise. In July of the same year two 184th TBAP crews tested the functioning of the nation's air defences by impersonating hostile aircraft, and in August two crews similarly checked the air defence system of the CIS as a whole.

In June 2004 a Tu-95MS named *Mosk**va*** (Moscow) was to make a flight along the 'Chkalov route' across the North Pole to Portland, USA, repeating the record-breaking flight made in 1937 by Valeriy P. Chkalov, but unfortunately the flight did not take place. The aircraft stood ready to take off any minute, the prepared crew awaiting permission. However, the Russian and US authorities responsible for the flight failed to reach an agreement. The USA demanded that an American navigator be included in the Russian bomber's crew, which the Russian side rejected flatly.

On 5th July 2008 a Tu-95MS coded '20 Red' was solemnly christened *Doob**na*** in honour of a town near Moscow where the well-known nuclear research centre is located. Prior to this the machine had been refurbished at the Taganrog aircraft factory.

On 9th August 2008 Tu-95MS '21 Red' was christened *Samara* after the city (formerly known as Kuibyshev) where the type was built.


В ПОБЕДЕ СЛАВА!

The badge of the 52nd GvTBAP superimposed on the Air Force flag with a laurel twig. The motto reads *V pobede **sla**va!* (*In victoriam gloria est* – Glory is in victory).

Over the years the 184th TBAP was commanded by the following people:

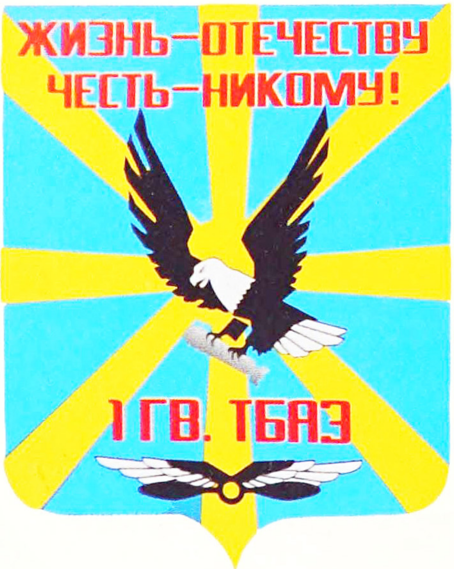
Colonel Aleksandr I. Afinogentov (from 2000);

Colonel V. A. Popov (from 2003).

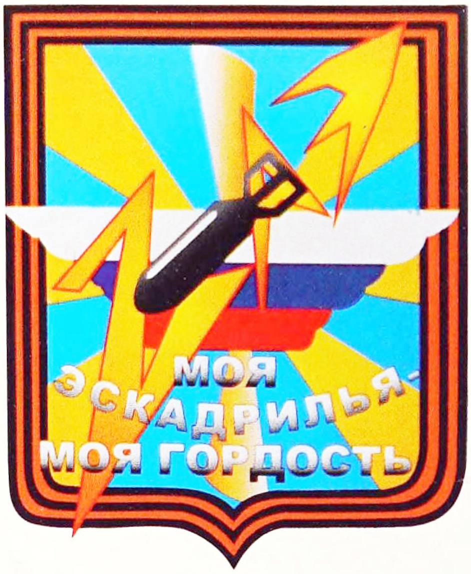
52nd GvTBAP

In 1989-94 the 52nd TBAP was organisationally a part of the Long-Range Aviation's 43rd Combat Training & Aircrew Conversion Centre. The centre's trainees took their training and qualification exams for aircraft captain and squadron commander posts in this regiment. In 1991 the unit's personnel began theoretical conversion training for the Tu-22M3 bomber, and in 1992 the regiment had fully mastered the new type. Concurrently the crews from the DA's 303rd TBAP and 219th ODRAP (*ot**del'**nyy **dahl'**niy raz**ved**yvatelnyy **avia**polk* – Long-Range Reconnaissance Air Regiment) took conversion training for the *Backfire-C* at Shaikovka AB where the regi-

A guard detail with the 52nd GvTBAP combat banner stands in front of the Tu-22M2 (aptly coded '52 Red' preserved as a gate guard at Shaikovka AB on a festive occasion.



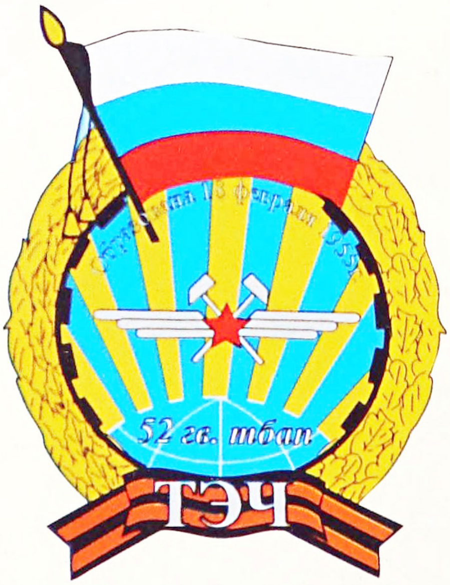
The squadron badge of the 52nd GvTBAP/Sqn 1 based on the Air Force flag. The motto is *Zhizn' – Otechestvu, chest' – nikomu!* (We'll give up our lives for Fatherland, but we won't give up our honour for anyone).



The badge of the 52nd GvTBAP/Sqn 2. The motto is *Moya eskadril'ya – moya gordost'* (My squadron is my pride).

ment was based. The last Tu-22M2 *Backfire-Bs* were retired by the 52nd GvTBAP in 1993.

The next reorganisation of the Long-Range Aviation led the regiment to be placed under the control of the 326th TBAD in September 1994. From 23rd November 1994 the regiment was committed to action in the Chechen Republic during the First Chechen War. The unit's aircraft made 65 sorties on their primary mission of wiping out Chechen guerrilla gangs in the republic's mountain areas with HE and HE/fragmentation bombs; they were also tasked with illuminating the battlefield and specific objectives with flare bombs. In 1996 the regiment carried out a special mission as a part of Russia's rapid reaction forces, launching Kh-15 missiles.

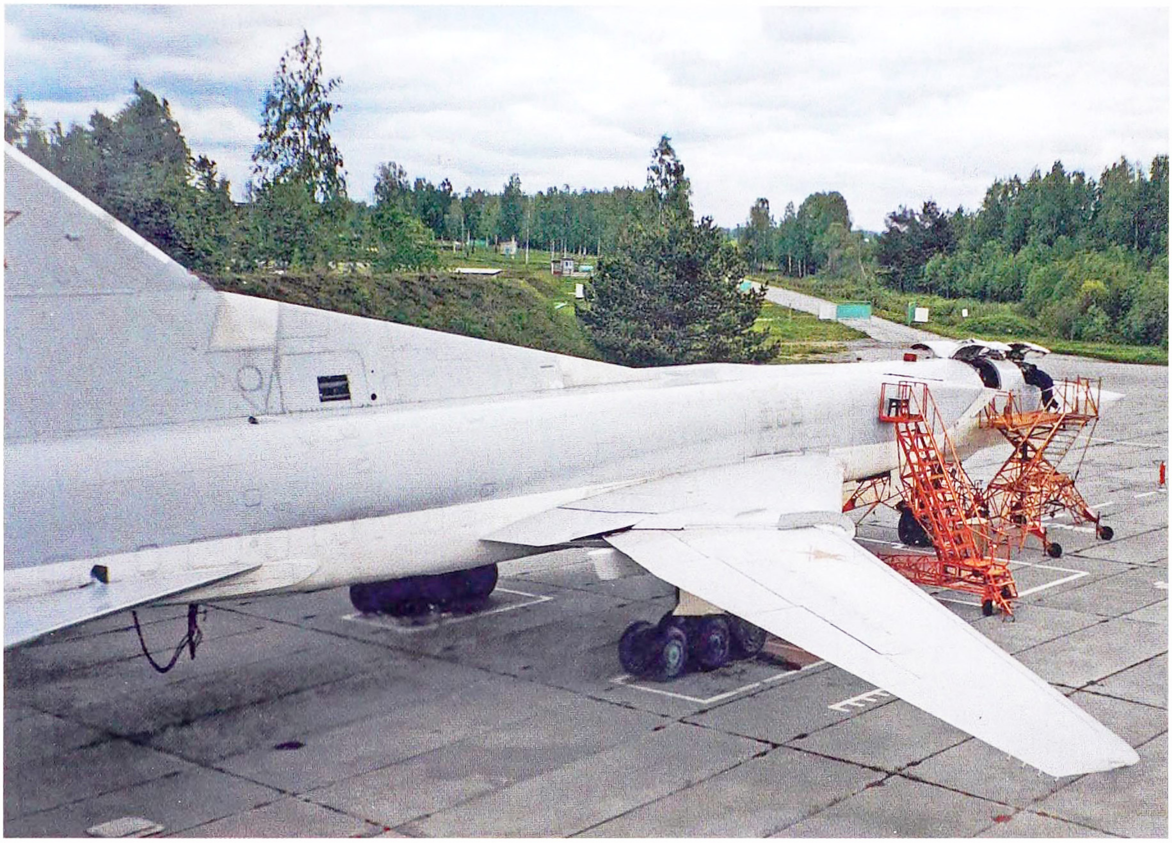


The 52nd GvTBAP's maintenance facility (TECh) established on 13th February 1955 also has its own badge.

By the turn of century the situation with combat training in the unit had stabilised in comparison with the turbulent early 1990s. The 52nd GvTBAP started fulfilling fairly complex tasks which included the sortie flown by Guards Lt.-Col. A. V. Dushevin on 8th April 1997 to reconnoitre the movements of NATO warships in the Black Sea. Also, two of the unit's crews took part in the command/staff exercise *Redoot-97*.

In May 1998 the regiment was transferred to the 22nd GvTBAD. Same year two crews participated in Exercise *Redoot-98* which included attacks with live bombs. In 1999 the regiment was represented by four crews in the command/staff exercise *Zapad-99*, the *Backfires* performing three launches of Kh-15 missiles which scored direct hits. Fulfilling a special assignment, one crew commanded by the unit's Deputy CO (Flight Training) Guards Lt.-Col. N. A. Bibikov performed ELINT along the borders of the Baltic States, Poland and the Ukraine by means of the Tu-22M3's radar. As a result, 30 communications and electronic warfare installations were detected, 21 of which were new to the Russian intelligence service. In 2000 two Kh-15s were launched (one of them at a maritime target) by the crews of Guards Lt.-Col. Rumyantsev (the navigator was Guards Maj. Girikov) and Guards Maj. Kudashkin (the navigator was Guards Maj. Fomchenko).

In 1999, for the first time after a seven-year break, the missile carriers fired their defensive cannons, using PIKS infra-red countermeasures rounds and PRLS rounds filled with chaff. During Exercise *Zapad-99* three practice

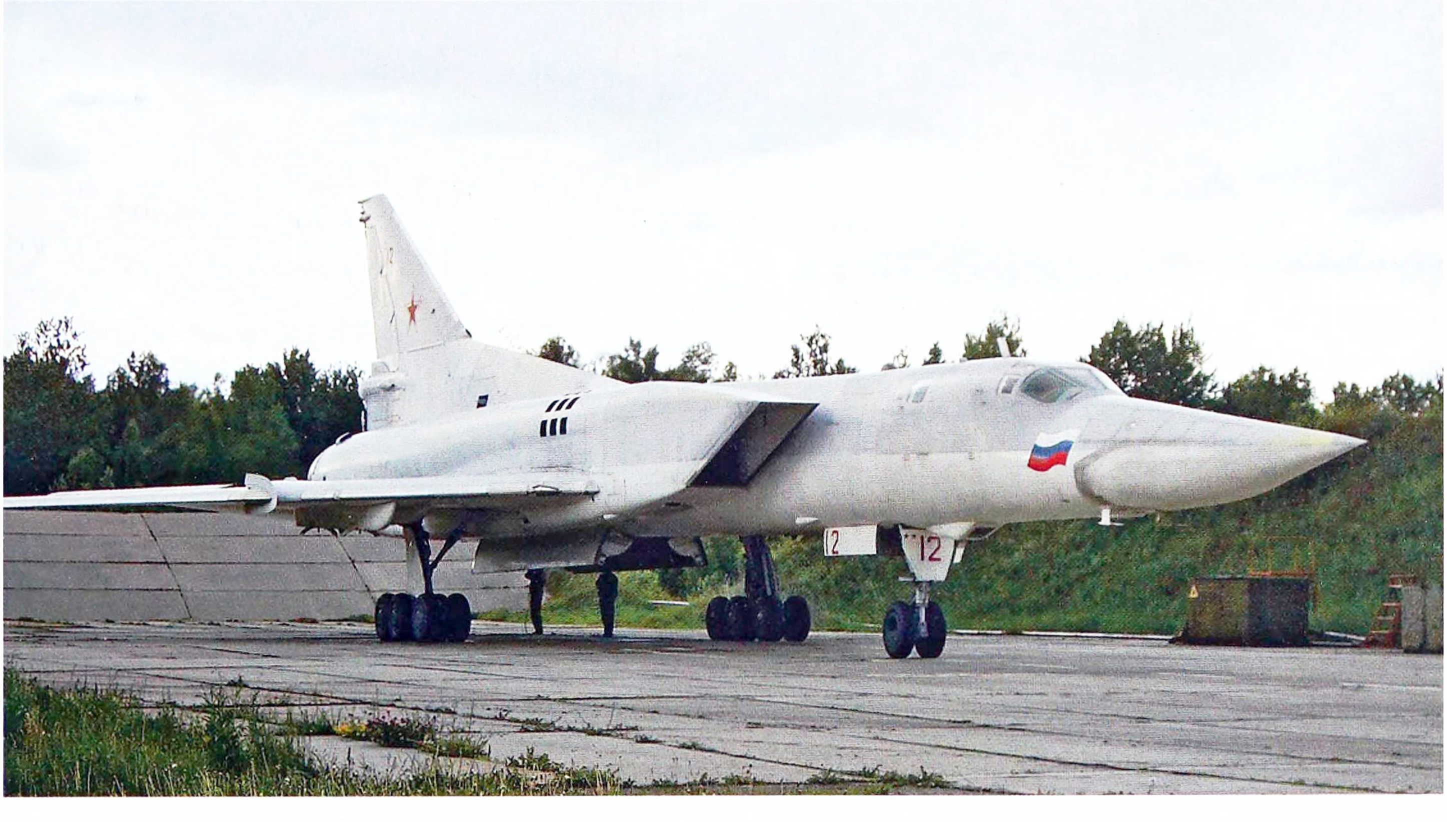


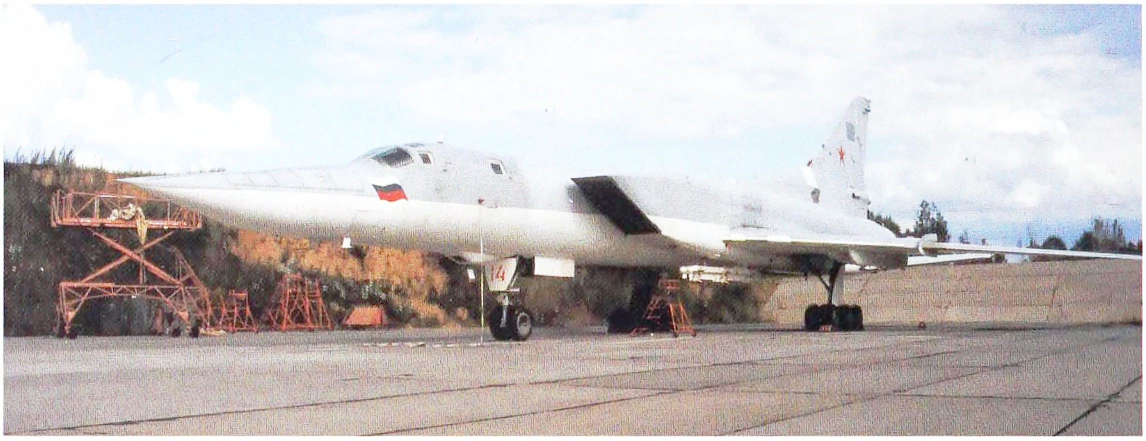
A 52nd GvTBAP Tu-22M3 at a dispersal at Shaikovka. The parking positions of support vehicles are marked on the hardstand.

launches of missiles were made. At the same time a Tu-22M3 captained by N. A. Bibikov made another flight along the borders of the Baltic States, Poland and the Ukraine, prompting several dozen hitherto unknown EW installations into revealing themselves. Two missile launches were made by the regiment's crews in 2000.

In 2001 six 52nd GvTBAP aircraft performed practice bombing attacks at two target ranges. The group was headed by the unit CO Guards Col. A. V. Blazhenko. The mission (to put a Blue Force airfield out of action) was completed with excellent results. In 2002 among the unit's pilots and navigators/WSOs, two received Sniper Pilot qualification ratings,

52nd GvTBAP Tu-22M3 '12 Red' sports two mission markers on the nose gear door. Note the open bomb bay doors.

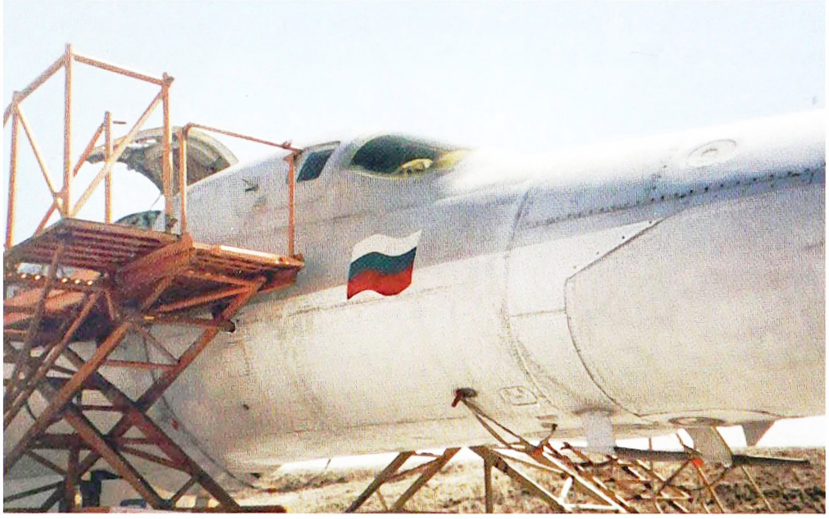




52nd GvTBAP Tu-22M3s in their revetments. '14 Red' is fitted with MBD3-U9M-0 bomb racks.

55
1944-1999
ШАЙКОВКА

Badges marking the 52nd GvTBAP's 55th and 60th anniversaries.



The Russian flag painted on the nose is a distinctive feature of 52nd GvTBAP *Backfire-Cs*.

one gained the 1st Class rating, and three persons qualified for 2nd Class. In September two crews captained by Guards Maj. Alesenko and Guards Maj. Rykov performed practice launches of Kh-15 missiles with good results that were noted by the higher command.

In February 2003 the regiment was subjected to a check by the MoD's Military Inspection, which included practice bombing by six aircraft at the Gur'yanovo target range and Kh-15 missile launches at range No. 500. The mission was accomplished, the results being assessed as 'good' (that is, four on a five-point scale). on 13th February 2003, for the first time in the unit's history, The crews headed by Guards Lt.-Col. V. M. Kozlov and Guards Maj. V. G. Rykov executed a launch of Kh-15 missiles on the so-called 'ballistic trajectory No. 9' (this is probably an especially complex mission profile not carried out earlier by the regiment). As a result of check the regiment received the general grade 'good'. Of course, the unit could have done better, and the regiment command has taken measures to step up the level of combat training. As a result, at the end of 2003 the 52nd GvTBAP was declared the best unit in the DA, earning the coveted transient prize of the 37th Air Army.

In October 2004 the 52nd GvTBAP celebrated its 60th anniversary.

After the Georgian aggression against South Ossetia on the night of 8th/9th August 2008 the crews of the 52nd GvTBAP were tasked with destroying a Georgian army convoy approaching the border of South Ossetia.

52nd GvTBAP Tu-22M3 '12 Red' with MBD3-U9M-0 MERs performs at an 'open house' in Akhtoobinsk.

The task was certainly sloppily prepared; in particular, the target had not been reconnoitered. Nevertheless, two flights of three Tu-22M3s each attacked the target from 6,000 m (19,685 ft). One flight was led by the regiment's Deputy CO Aleksandr Koventsov, the other by regiment CO Roman M. Oparin (the son of the former DA Commander Lt.-Gen. Mikhail M. Oparin). Unexpectedly for the Russians the Georgian troop convoy included the recently acquired Buk-M1 mobile surface-to-air missile (SAM) systems, and these were put into action immediately. As a result, Koventsov's aircraft was shot down by a missile which approached the bomber from behind and above. As the warhead exploded, the navigator Maj. Viktor Pryadkin and WSO Maj. Igor' Nesterov were killed outright. The explosion also damaged the canopy door of co-pilot Maj. Vyacheslav Malkov; he was forced to push out the door manually before ejecting. For reasons unknown the aircraft captain, Aleksandr Koventsov, did not eject. For 11 long seconds he pressed on in the direction of

Immaculate Tu-22M3 '15 Red' retracts the gear as it begins a training sortie from Shaikovka.

A view of the dispersal area at Shaikovka AB.

840
ТБАП
65
1942

The 840th TBAP badge. The motto reads 'Faith, duty, rectitude, bravery'.

friendly troops and tried to maintain command of his flight, shouting commands over the radio to his wingmen to take evasive action. The pilot perished together with the aircraft. Later, the regiment's crews flew missions to suppress Georgian positions in the Kodori Gorge. There they also had to dodge an incoming SAM.

After end of the military operation the three airmen killed in the shootdown were buried in the garrison at Shaikovka. They were posthumously awarded government awards.

Over the years the 52nd GvTBAP was commanded by the following people:

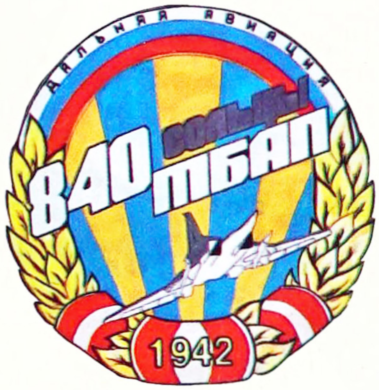
Guards Lt.-Col. S. V. Kol'tsov (from 1988);
Guards Col. I. F. Konovalov (from 1994);
Guards Col. A. P. Koren'kov (from 1998);
Guards Col. A. V. Blazhenko (from 2000);
Guards Col. B. V. Seryodkin (from 2003);
Guards Col. Roman M. Oparin (from 200?);
Guards Col. D. L. Kostyunin (from 2009).

840th Red Banner TBAP

The 840th TBAP also was one of the oldest regiments in the Russian Long-Range Aviation. The establishment of a regiment with this number had been ordered during the Great Patriotic War on 4th April 1942; the regiment was formed at Lebedyan' airfield on the Bryansk Front as a part of the 2nd Strike Group of the Supreme High Command.

When the USSR disintegrated, the 840th TBAP was part of the 326th TBAD which, in turn, was part of the 46th Air Army headquartered in Tartu (Estonia). When the DA units pulled out from Estonia and Belarus and a reshuffle took place, the 840th TBAP switched from two-squadron to three-squadron structure and was placed under the control of the 22nd GvTBAD headquartered in Engels. The regiment was deployed at Sol'tsy AB in the Novgorod Region, north-western Russia.

Since 1989 the 840th TBAP has taken part all armed conflicts which have involved the DA in one way or another. Little has been revealed to date about the actions of the Long-Range Aviation during the escalation of political tension in Tajikistan. In August 1993 six 840th TBAP Tu-22M3s operating from Engels flew six sorties against armed opposition gangs sup-



The unit badge of the 840th TBAP indicates its home base, Sol'tsy.

ported by Afghan Mujahideen on the Tajik-Afghan border, whereupon the Mujahideen attacks on the outposts of the Moscow Border Guards Group sharply declined. (The Moscow Border Guards Group is a detachment of the Russian Federal Security Service (FSB) frontier troops protecting a part of the Tajik border in keeping with a Russian-Tajik treaty.) This regiment's combat experience showed once again that the demoralising effect on the Afghan Mujahideen from the use of heavy bombers was much bigger than the actual damage inflicted by the bombs. On 6th-9th September 1994 six more sorties were flown to repel an attack of the Tajik opposition guerrillas on the Russian frontier post.

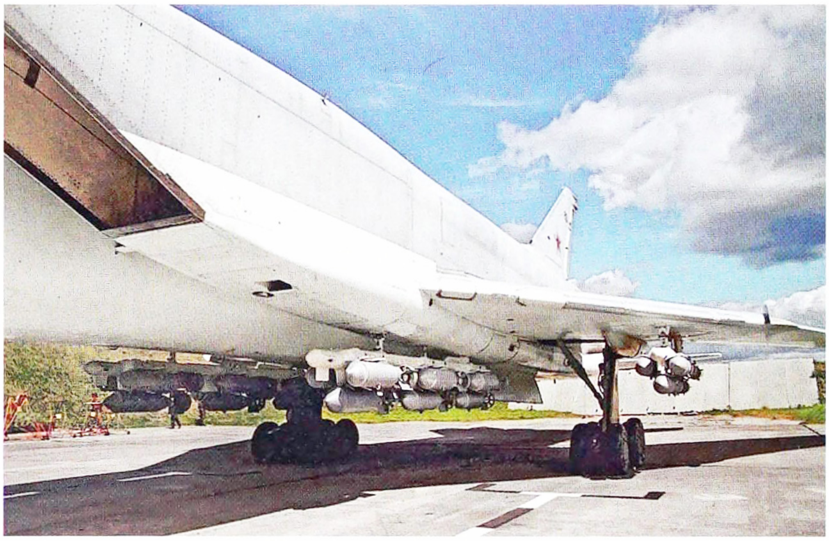
From 26th November to 31st December 1994 six of the regiment's aircraft participated in the elimination of Djokhar Dudayev's guer-

Full frontal of a Tu-22M3 with the canopies open.

The crew of an 840th TBAP Tu-22M3 climbs out after a sortie.

A ground crewman waves an arriving *Backfire-C* to its hardstand.

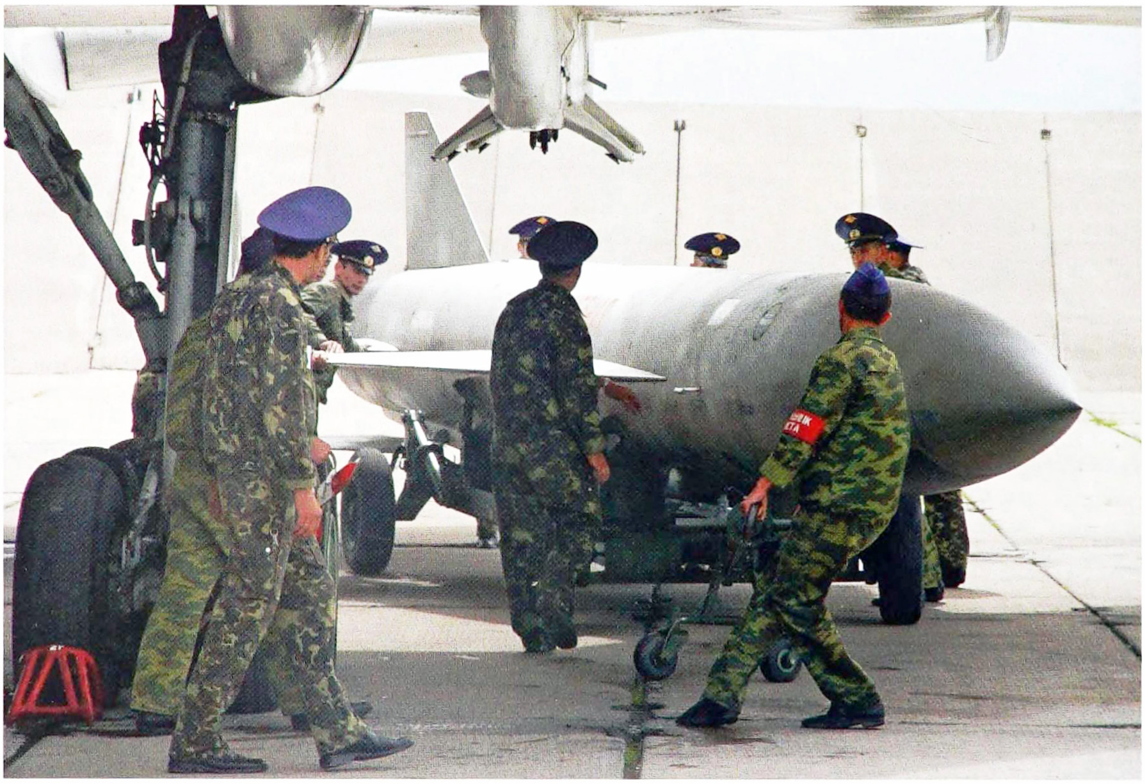
Opposite page: the crowded 840th TBAP dispersal at Sol'tsy AB. Some of the bombers look very weathered.



This 840th TBAP Tu-22M3 carries 36 FAB-250M54 HE bombs externally on MERs.

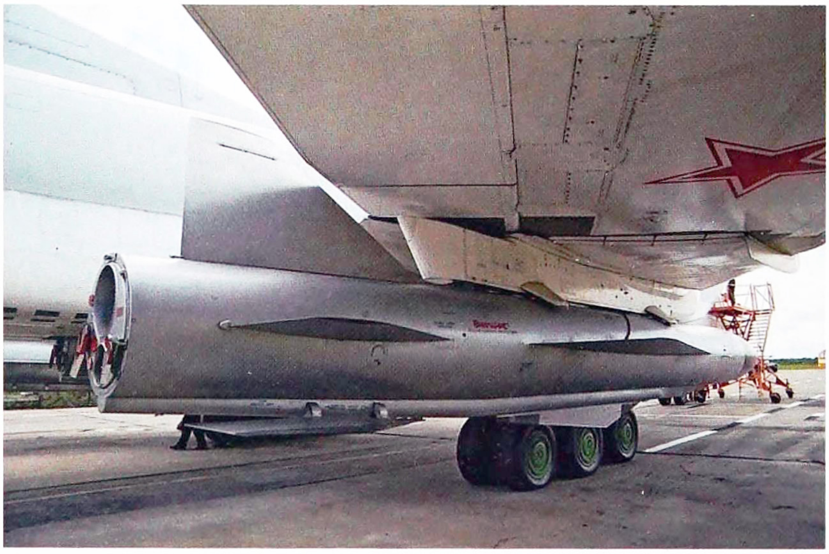
rilla gangs in the Chechen Republic. Besides combat sorties, the crews occasionally carried out much more pleasant assignments. On 12th-19th June 1994 three 840th TBAP crews took part in the demonstration flights at Vozdvizhenka AB during the celebrations in honour of the 'Normandie-Niemen' attack regiment's 50th anniversary. This unit, the 18th *Vitebskiy* GvShAP, was based at Galyonki AB in the Far East and was the successor of the wartime 18th GvIAP fighter regiment from which the famous French fighter squadron 'Normandie' originated.

As was the case in the Long-Range Aviation at large, after the demise of the USSR the situation in the unit as regards combat training changed radically for the worse. Yet, even in the difficult 1990s the regiment managed to maintain one of the highest average flight times per annum in the DA. Each year the regiment took part in tactical drills and other missions.



Ground crews wheel a Kh-22NA missile into position beneath the port wing of a *Backfire-C* at Sol'tsy AB.

On 9th May 1995 three of the 840th TBAP's Tu-22M3s took part in the VE-Day 50th anniversary celebrations, passing over Poklonnaya Gora in Moscow during the Victory Day parade. The lead aircraft was captained by the regiment's Deputy CO Lt.-Col. V. V. Prozorov, with 326th TBAD Commander Maj.-Gen. Igor' I. Khvorov as co-pilot. The wingmen were piloted by squadron commander Lt.-Col. N. V. Troosov (captain) and



This 840th TBAP Tu-22M3 is loaded with three Kh-22N missiles.

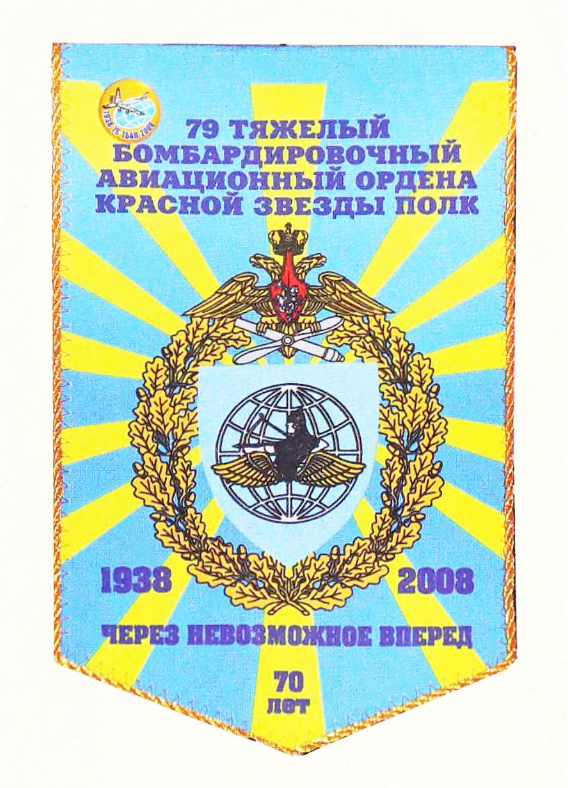
840th TBAP CO Col. V. N. Anan'yev, deputy squadron commander Maj. A. V. Volkov (captain) and squadron commander Lt.-Col. A. Ye. Chaikovskiy. One day earlier, on 8th May, a Tu-22M3 crew comprising captain Maj. B. V. Golev, co-pilot/instructor Maj. G. Ivanov, navigator Maj. V. Tigunov and WSO O. Il'chuk took part in a naval parade in St. Petersburg.

Between 25th and 28th March 1997 two Tu-22M3s of the 840th regiment tracked the movements of NATO surface ships in the Black Sea.

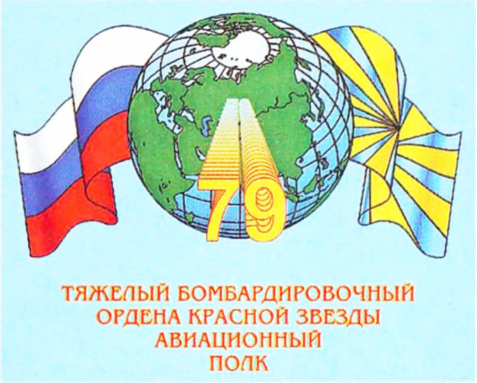
In 2000 and 2001 the 840th TBAP was rated best in the 37th (Strategic) Air Army of the Supreme High Command.

In 2002 the unit resumed joint flights with the crews of sister ships from the North Fleet air arm. Crews captained by Maj. B. V. Golev and Maj. M. V. Golovanov performed practice launches of Kh-22M missiles. After the flight, having removed their 'bone dome' flying helmets, the 840th TBAP pilots and navigators donned the Navy style peakless caps presented by the naval pilots, not their usual fore-and-aft caps or peak-caps of the Russian Air Force. In 2003, for the first time in a decade, four of the unit's Tu-22M3s dropped live 3,000-kg (6,610-lb) bombs on a target range.

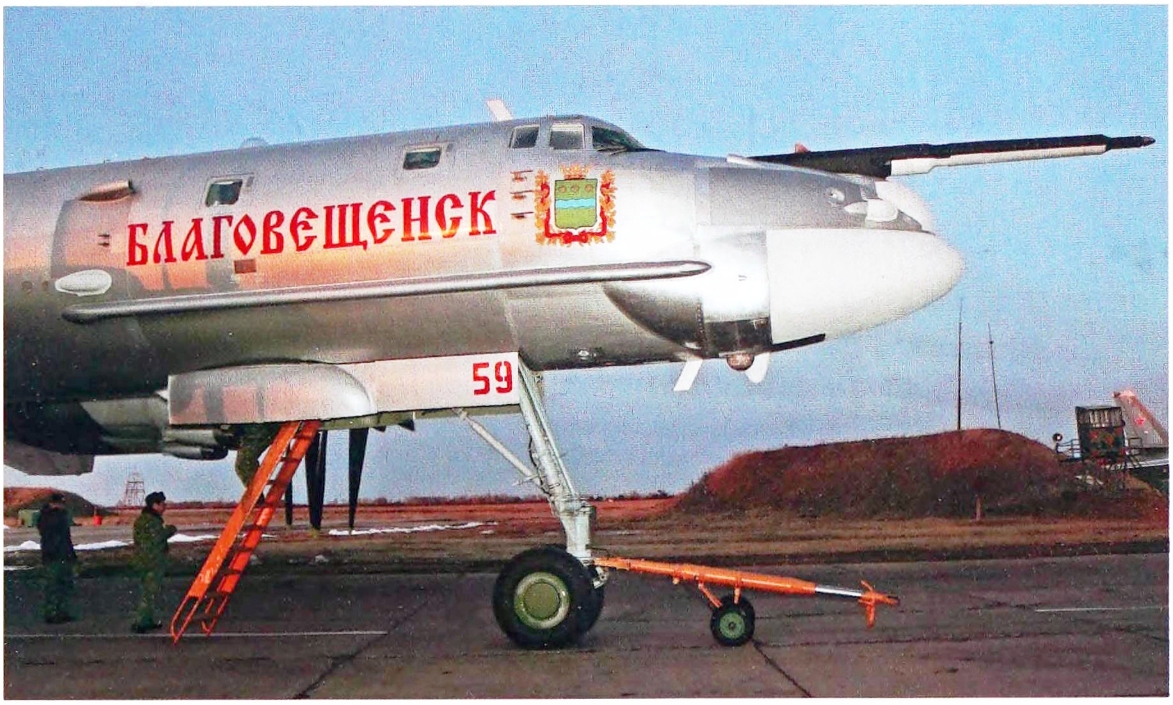
On 8th July 2004 a tragedy occurred. A Tu-22M3 which had carried out a 'hi-lo-hi' training sortie including a simulated missile launch and firing of IRCM rounds from the tail cannon crashed on landing approach to Sol'tsy AB. The entire crew – captain Maj. Oleg L. Tyapkin, co-pilot Capt. Il'ya Lovkov, navigator 1st Class Maj. Nikolay Tolstoe and WSO


79 ТЯЖЕЛЫЙ БОМБАРДИРОВОЧНЫЙ АВИАЦИОННЫЙ ОРДЕНА КРАСНОЙ ЗВЕЗДЫ ПОЛК
1938
2008
ЧЕРЕЗ НЕВОЗМОЖНОЕ ВПЕРЕД
70 лет

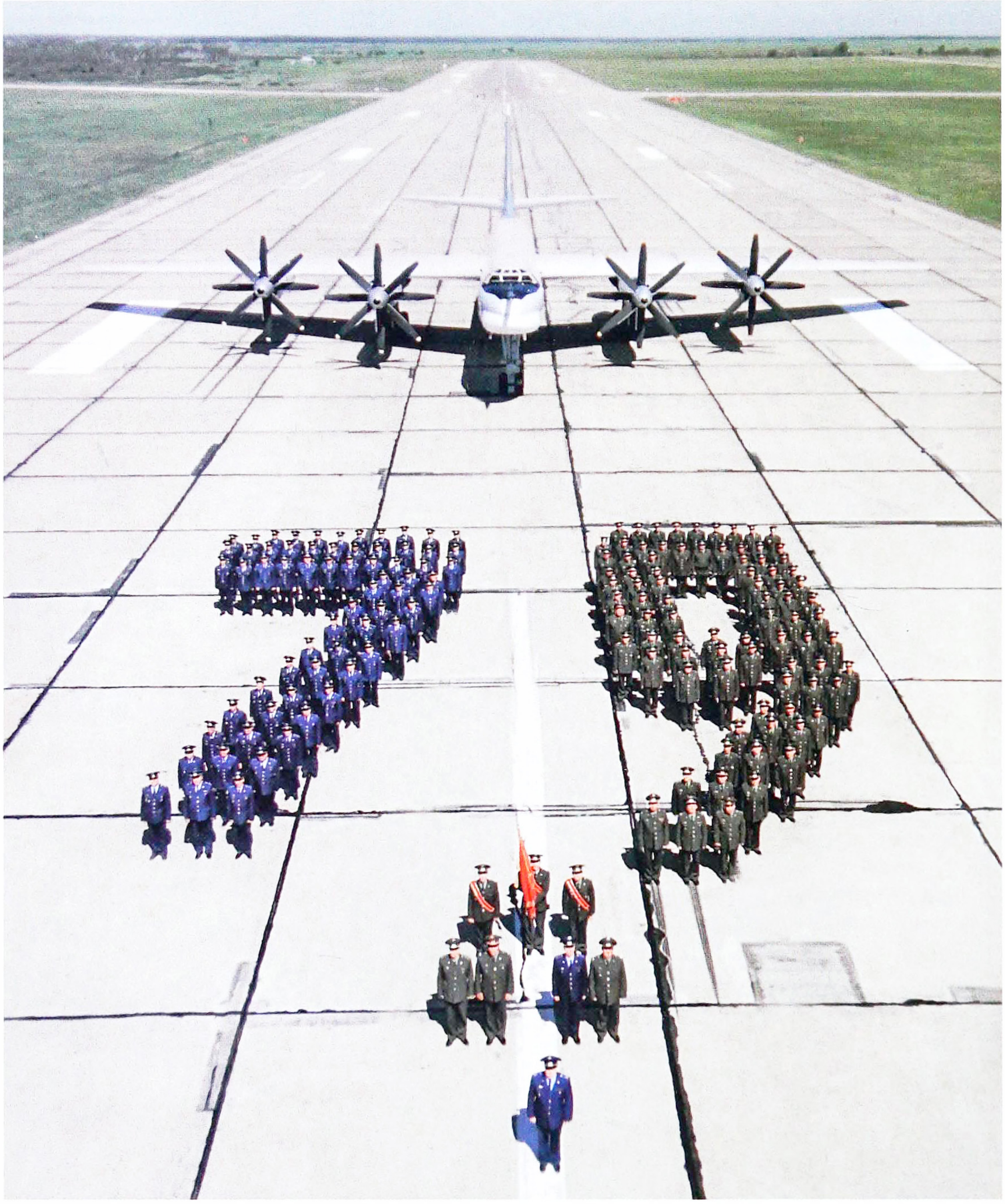
A pennant marking the 70th anniversary of the 79th TBAP awarded the Red Star Order. The motto reads *Cherez nevozmozhnoye vperyod* (Onward, in spite of impossible circumstances – or Mission Impossible, if you like).


79
ТЯЖЕЛЫЙ БОМБАРДИРОВОЧНЫЙ ОРДЕНА КРАСНОЙ ЗВЕЗДЫ АВИАЦИОННЫЙ ПОЛК

The unit badge of the 79th TBAP.


БЛАГОВЕЩЕНСК
59

79th TBAP Tu-95MS '59 Red' bears the name *Blagoveshchensk* and the city crest.



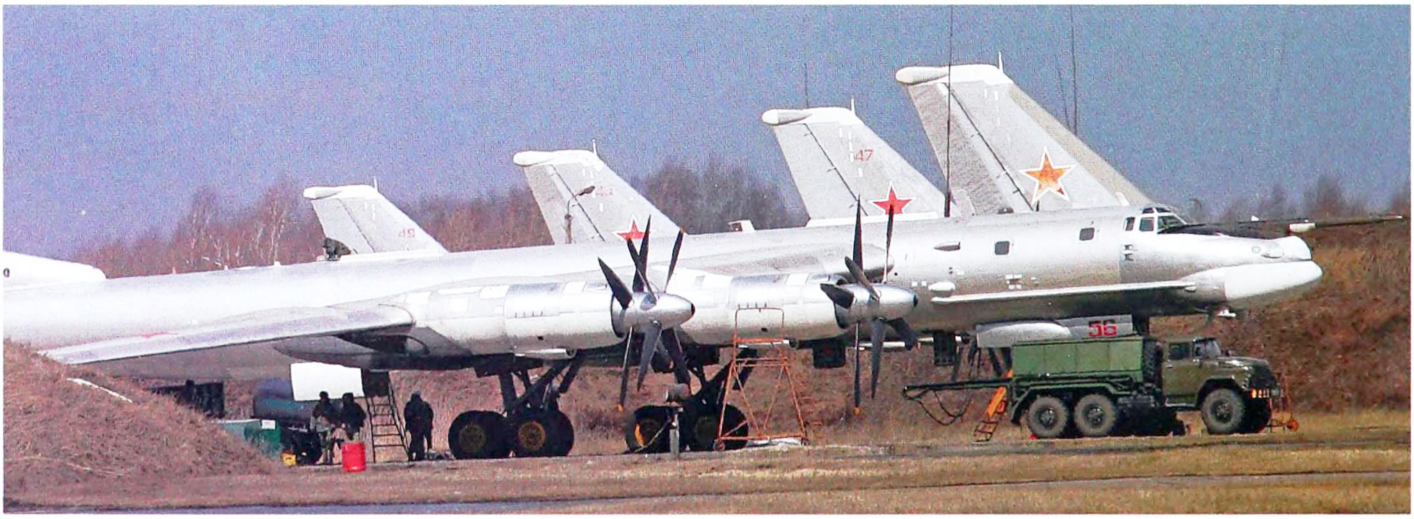
A smart parade formation of the 79th TBAP personnel. Note the different colour of the uniforms.

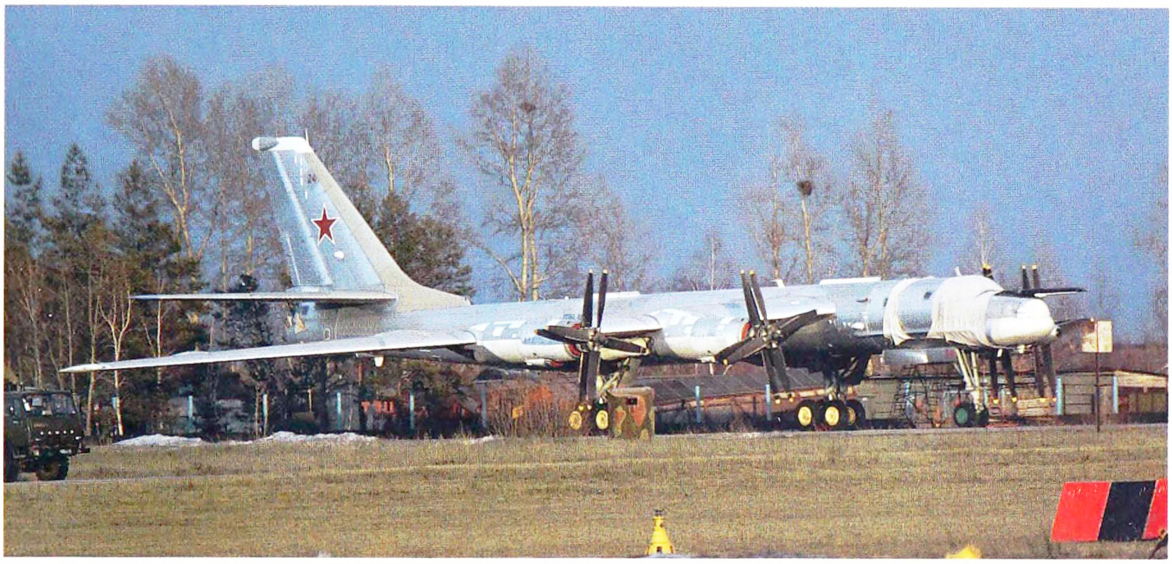
A badge marking the 79th TBAP's golden jubilee in 1998.

1938 79 ТБАП 2008

This simple badge marks the unit's 70th anniversary in 1998.

Maintenance in progress on 79th TBAP Tu-95MS '56 Red' at Ookraïnka AB.





Judging by the missing spinners, 79th TBAP Tu-95MS '24 Red' is grounded for repairs.

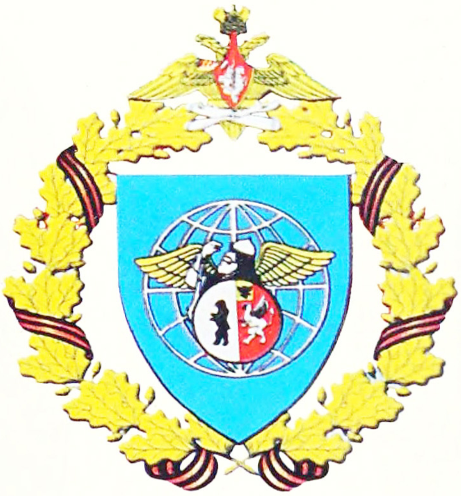
Aleksandr Ivanov – lost their lives. Within less than a year the regiment had actually lost six persons: the crew of the Tu-160 missile carrier which crashed at Engels in 2003 (see page 65) included two pupils of the 840th TBAP – the co-pilot and the WSO. The crash was a severe blow to the Long-Range Aviation, as the Tu-22M3 fleet was immediately grounded pending investigation, leaving the DA without a substantial part of its fleet. Once the causes of the tragedy had been established, in September 2004 planned flights resumed and the Tu-22M3 once again became a familiar sight and sound in the skies near Sol'tsy AB.

Over the years the 840th TBAP was commanded by the following people:

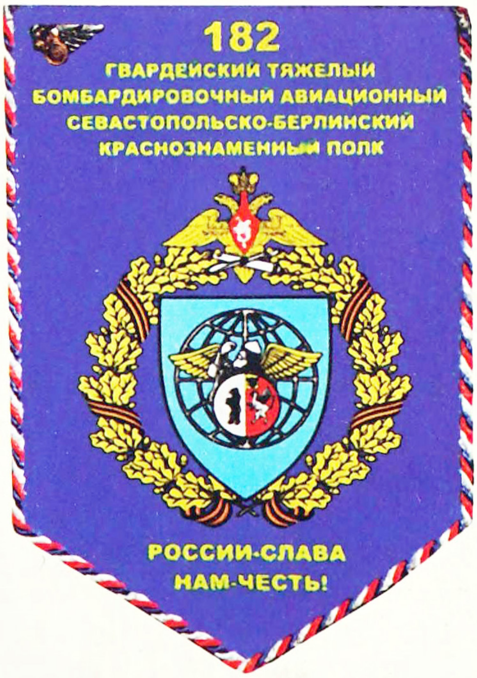
Colonel V. A. Yekimenko (from 1989);
Colonel V. N. Anan'yev (from 1992);
Colonel V. V. Prozorov (from 1997);
Colonel V. N. Anan'yev (from 1998);
Colonel Yu. V. Nagayev (from 2002);
Colonel A. Tsilev.

79th TBAP (Red Star Order)

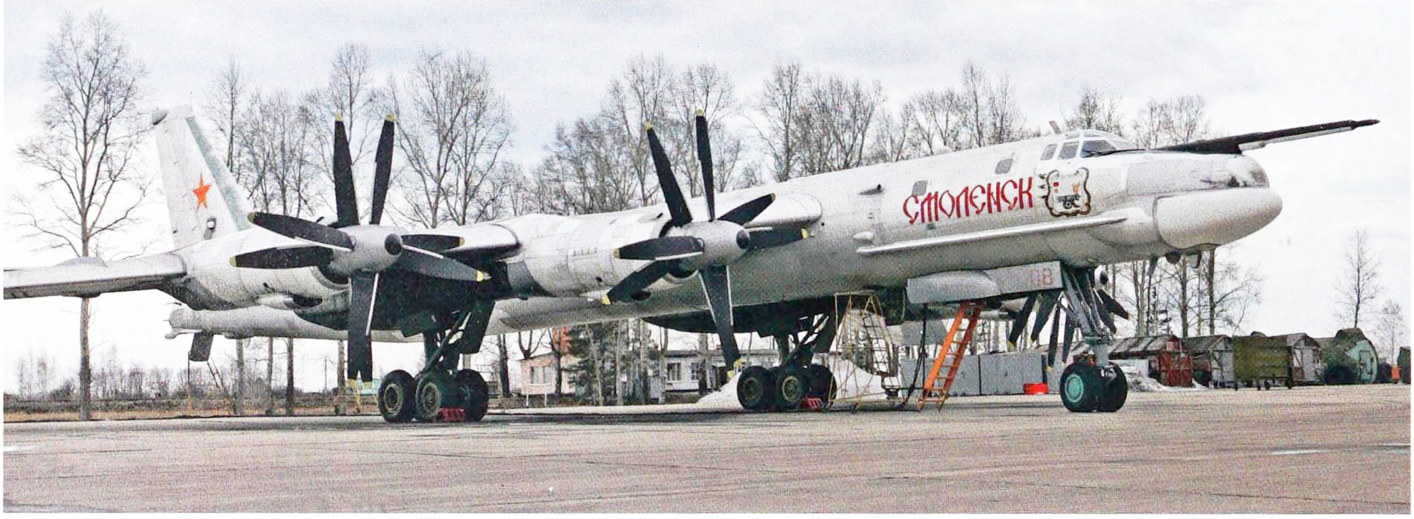
Up to the demise of the Soviet Union the 79th TBAP decorated with the Red Star Order and based at Ookraïnka AB was equipped with Tu-95K-22 missile carriers, which were to be scrapped in accordance with the SALT-2 treaty. Nevertheless, the regiment was not left without any aircraft at all – in 1993 the 79th TBAP started converting to the more modern Tu-95MS. Part of the unit's complement of *Bear-Hs* originated from Kazakhstan where they had seen service with the 1023rd and 1226th TBAPs at Semipalatinsk in Soviet times. On 25th September 1996 a crew captained by Lt.-Col. V. Ye. Shevtsov became the unit's first to launch a Kh-55 cruise missile.



The unit badge of the 182nd *Sevastopol'sko-Berlinskiy* Red Banner GvTBAP.



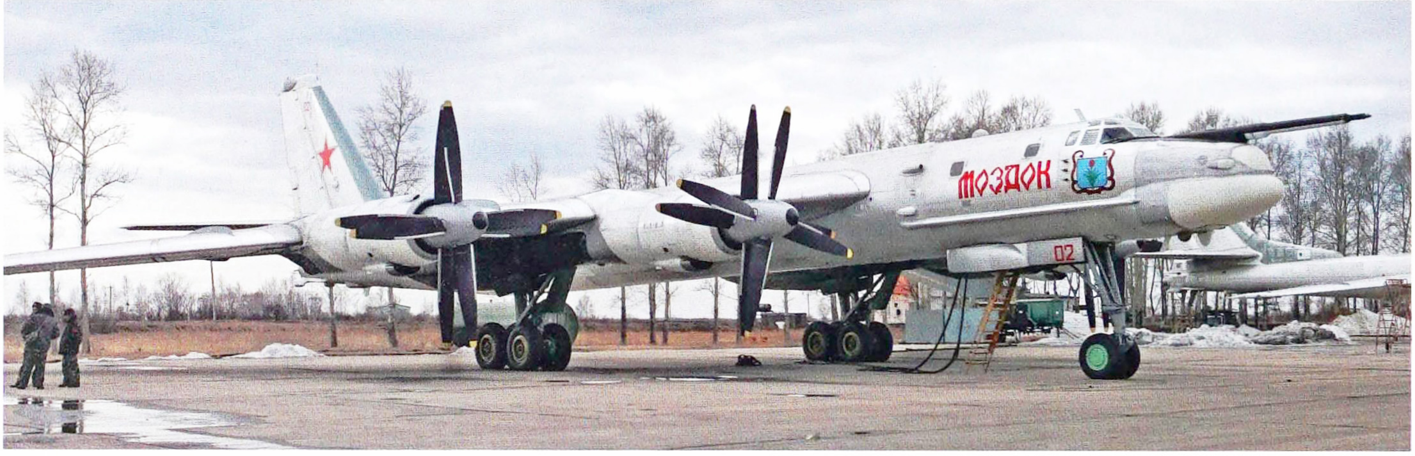
A pennant with the badge of the 182nd TBAP. The motto reads *Rossii – slava, nam – chest'!* (Glory to Russia, honour to us).



One of the 182nd GvTBAP *Bear-Hs*, '08 Red' *Smolensk*.

On 31st August 1999, when the 79th TBAP was celebrating its 60th anniversary, one of its Tu-95MSs coded '59 Red' was christened *Blagoveshchensk* after a nearby city.

craft of the former 79th TBAP were pooled with those of the co-located 182nd GvTBAP in 2009 to form the 6952nd Air Base at Ookraïnka.



Sister ship '02 Red' is named *Mozdok* after her former home base.

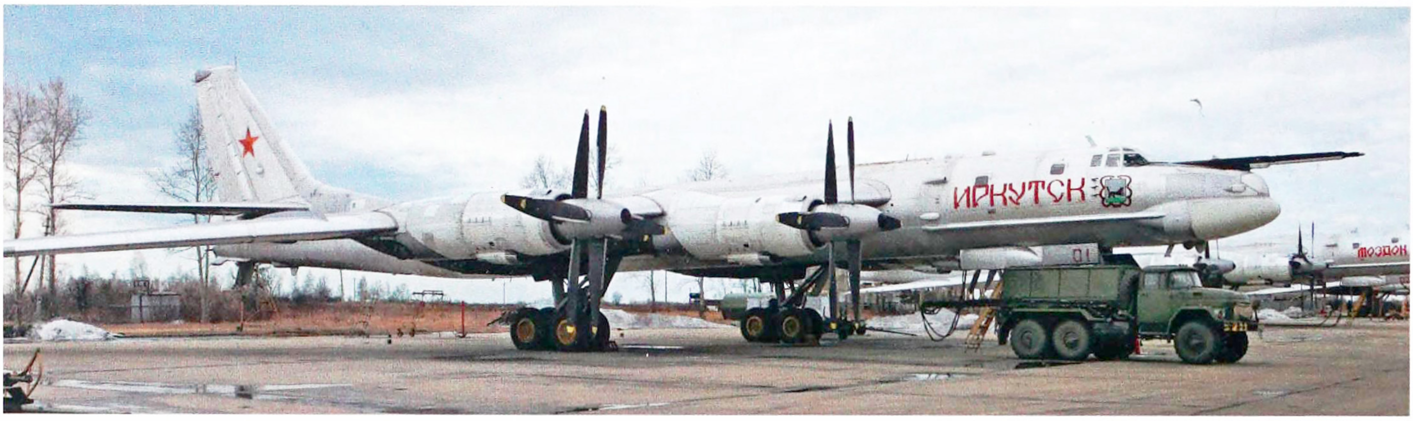
182nd GvTBAP Tu-95MS '01 Red' *Irkutsk* is powered up by an APA-80 GPU.

On 31st August 2009 the 79th TBAP celebrated its 70th anniversary. At the ceremonial line-up on occasion of the jubilee the regiment CO Col. Sergey Danilenko (Military Pilot 1st Class) congratulated the personnel and announced an order for the encouragement of specific servicemen.

In the course of the current reorganisation of the Russian Air Force the personnel and air-

Over the years the 79th TBAP was commanded by the following people:

Lieutenant-Colonel A. S. Shoomskiy (from 1987);
Colonel S. I. Yerokhin (from 1992);
Colonel N. P. Degtyar' (from 1996);
Colonel Yu. E. Kuznetsov (from 2001);
Colonel S. P. Danilenko (from 2003).



182nd *Sevastopol'sko-Berlinskiy* Red Banner TBAP

In 1987 the 182nd TBAP based at Mozdok in what was then the Chechen-Ingush Autonomous Soviet Socialist Republic in the North Caucasus began converting to the Tu-95MS. The first *Bear-H* arrived in Mozdok on 30th September that year; it was ferried there by a crew captained by the commander of Squadron 1, Guards Lt.-Col. A. A. Vavilov (the son of the regiment's first commander). At the end of the year the regiment had three such aircraft, and more were coming up.

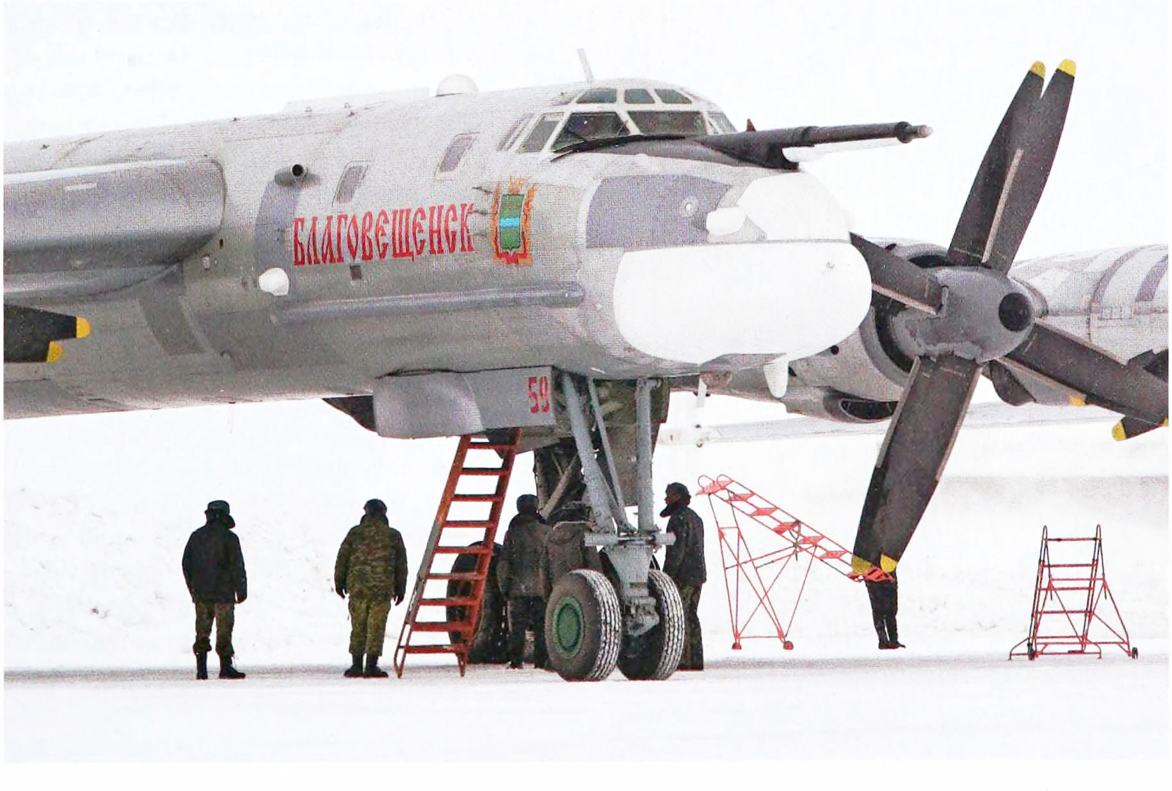
When an ethnic conflict erupted between the Ossetians and the Ingushes in 1992, the regiment was temporarily redeployed to Engels-2 AB out of harm's way. After the disintegration of the Soviet Union the 182nd TBAP flew intermittently. In March 1993 the regiment returned to Mozdok, but a year later the First Chechen War broke out and the nuclear delivery vehicles were again moved away from the 'hot spot'. In November 1994 the regiment returned to Engels; its former base at Mozdok was crammed with Tactical Aviation aircraft, aircraft of the Ministry of Internal Affairs and the Ministry of Civil Aid and Protection (EMERCOM of Russia). The 182nd TBAP's ground personnel, who remained in Mozdok, helped to service the 'guests'.

On 6th May 1992 two 182nd TBAP Tu-95MSs made a goodwill visit to Barksdale AFB, Louisiana (a USAF Strategic Air Command base). They were captained by Squadron 1 deputy commander, Military Pilot 1st Class, Guards Maj. A. I. Pechatnyy and a detachment commander of Squadron 1, Sniper Pilot, Guards Maj. Yu. I. Popel'nukha. In 1993 a Tu-95MS captained by Squadron 2 deputy commander Guards Maj. V. S. Zemnukhov took part in the Royal International Air Tattoo '93 at RAF Fairford. On 28th July 1994 a *Bear-H* captained by Zemnukhov was displayed at the Farnborough International '94 airshow. On 21st August 1994 a crew headed by Guards Lt.-Col. K. A. Yepifanovskiy made another friendly visit to Barksdale AFB. In 1995 the crew of Guards Maj. Pechatnyy took part in the VE-Day 50th anniversary air parade at Polkonnaya Gora, Moscow. In 1997 the crew of Military Pilot 1st Class Guards Maj. Zemnukhov successfully launched Kh-55 cruise missiles within the limits of the command-strategic exercise *Redoot-97*.

In keeping with a directive signed by the Deputy Minister of Defence of the Russian Federation on 27th June 1998, the 182nd GvTBAP relocated from Mozdok to Ookraïnka AB in the Amur Region where the 40th TBAP was based. The order said: *'The 182nd TBAP and 40th TBAP shall be reorganised as the 40th TBAP retaining the 182nd TBAP's Combat Banner, honorary appellations, awards and the historical record card'*. Yet, soon enough (on 2nd June) a new order restored the united regiment's former number – 182nd GvTBAP.

79
ТБАП
1938

The badge of the 79th TBAP bearing the same 'Mission Impossible' motto.



'59 Red' is readied for flight. 79th TBAP and 182nd GvTBAP *Bear-Hs* have black-tipped spinners.

182
ГБАП
1943

The badge of the 182nd GvTBAP featuring the unit motto.

A Tu-22M3 takes off in full afterburner.

On 19th May 1999, in keeping with a Decision of the 37th (Strategic) Air Army's War Council and the Smolensk City Council of People's Deputies (= Members of Parliament), the name *Smolensk* was bestowed upon a 182nd TBAP Tu-95MS coded '08 Red'. On 17th September that year the crews of Guards Lt.-Col. Sergey P. Danilenko and Guards Maj. A. P. Smurygin, for the first time after a long break, made a flight in the area of the Aleutian Islands in accordance with the plan of the command/staff exercise *Vostok-99*. On 7th September 2000, after successfully launching a Kh-55 cruise missile on a northern target range, Danilenko's crew flying the same Tu-95MS '08 Red' *Smolensk* landed at and took off from Machoolishchi AB near Minsk, Belarus, for the first time since 1994 – hereby reaffirming the defensive union of two friendly nations.

ВОЕННО-ВОЗДУШНЫЕ СИЛЫ
РОССИИ
1944
200
БРЕСТСКИЙ
тбап
1944-
-1999
гарнизон
БЕЛАЯ

A pennant marking the 55th anniversary of the 200th GvTBAP.

On 1st November 2000, Tu-95MS '01 Red' was christened *Irkutsk* according to a Decision of the 37th VA's War Council and the Irkutsk City Council of People's Deputies. On 19th December that year two *Bear-Hs* – *Smolensk* (captained by Guards Lt.-Col. S. Ye. Zhukov) and *Irkutsk* (captained by Guards Maj. I. V. Boyarintsev) – made a flight to the North Pole for the first time after a ten-year break, making a technical stop at the auxiliary airfield in Tiksi. On 24th April 2002 the crews of Boyarintsev and Guards Maj. S. A. Ovsyannikov successfully completed a mission within the scope of a 37th VA exercise, launching a Kh-55 cruise missile at the northern target range. For the first time since the move of the strategic missile carriers to Transbaikalia the crews took off on a missile launch mission from their home base.

As noted above, in the course of the current reorganisation the personnel and aircraft of the former 182nd GvTBAP has been pooled with the 79th TBAP to form the 6952nd Air Base.

Over the years the 182nd GvTBAP has been commanded by the following people:

Guards Col. V. K. Gubanov (from 1988);
Guards Col. A. S. Shoomskiy (from 1993);
Guards Col. A. I. Goncharov (from 1998);
Guards Col. O. V. Logunov (from 1999);
Guards Col. I. G. Miroshnichenko (from 2002);
Guards Col. Yu. Pelin.

200th Brestskiy Red Banner GvTBAP

This regiment had a long history and was based in Belorussia in the final years of the Soviet era. In June 1987 the crew of Guards Maj. Barinov became the unit's first to launch a Kh-22N missile from a Tu-22M3. The first launches of the more advanced Kh-15 missile were made in December 1988 by the crews of Guards Lt.-Col. Igor' I. Khvorov (the unit CO), who later became Commander of the 37th Air Army, and Guards Lt.-Col. A. I. Roganov. In 1990 the crews of Igor' I. Khvorov and Guards Maj. V. K. Aleksanitsyn became the first to launch Kh-15 missiles as a pair.

In 1993 an agreement was reached between the Russian Federation and the Republic of Belarus and the unit began preparations for the move to Russia. In November-December 1994 the 200th GvTBAP relocated way beyond the Urals Mountains, to Belaya AB near Irkutsk in East Siberia. This was already occupied by two heavy bomber units – the 1225th and 1229th TBAPs, likewise operating Tu-22M3s. For a while the three units shared the base; then, on 2nd May 1998 the hardware of all three regiments was pooled, coming under the control of the 200th GvTBAP, which resides at Belaya AB to this day.

In December 1994 and January 1995 the regiment took part in the elimination of Dudayev's guerrilla gangs during the First Chechen War.

Despite being an Air Force unit, in 2003 the 200th GvTBAP participated in a Pacific Fleet exercise, in the course of which the crews of Guards Lt.-Col. D. V. Kostomyotov and Guards Lt.-Col. S. A. Yashin made accurate practice launches of cruise missiles. The unit earned top grades for the exercise.

Over the years the 200th GvTBAP was commanded by the following people:

Guards Lt.-Col. A. V. Kol'chugin (from 1991);
Guards Lt.-Col. I. F. Konovalov (from 1993);
Guards Col. Yu. D. Abakoomov (from 1995);
Guards Col. A. S. Konovalov (from 1998);
Guards Col. M. V. Andreyev (from 2002);
Guards Col. V. V. Tsyrengarmayev (from 2002);
Guards Col. D. V. Kostomyotov (from 200?).

200
ТБАП
1944
БРЕСТСКИЙ

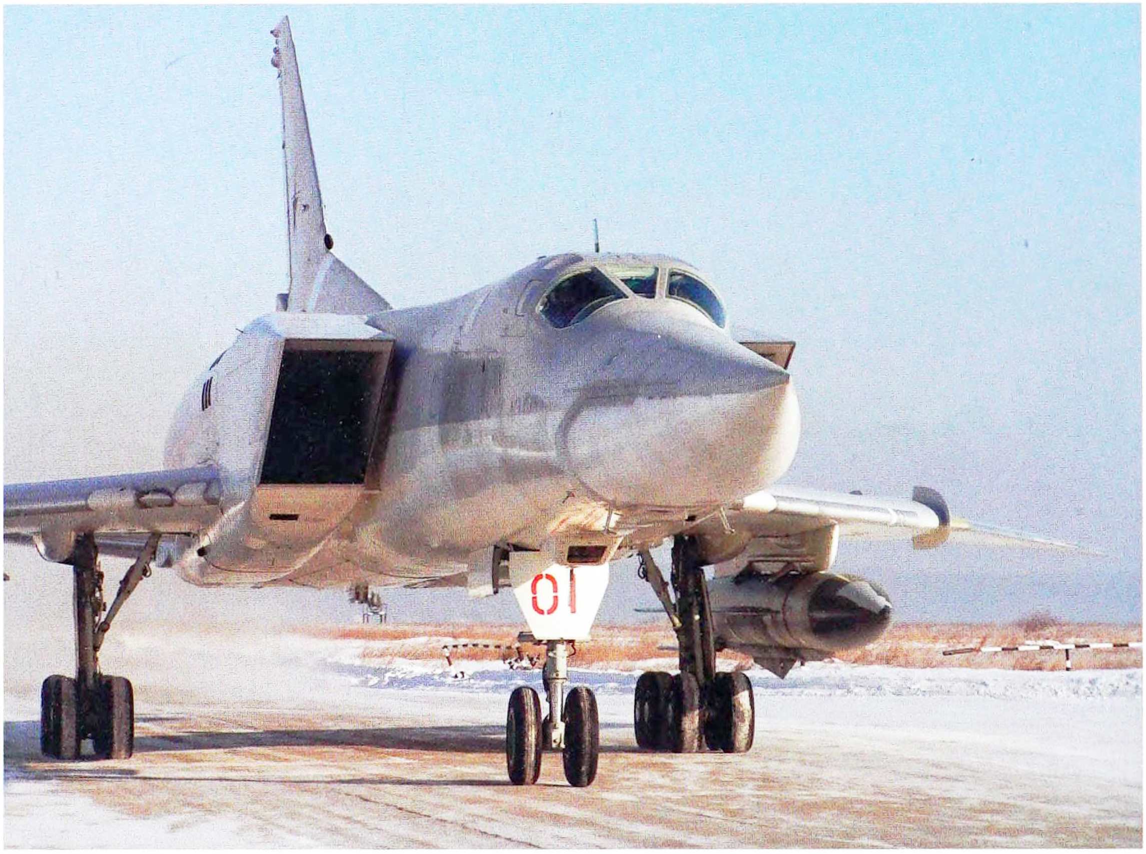
The unit badge of the 200th GvTBAP.

444th Berlinskiy TBAP (Kutuzov Order 3rd Degree and Aleksandr Nevskiy Order)

This regiment, too, had a very long history; its formation began in Khabarovsk as early as 5th July 1941.

In November 1990 the regiment, which was based at Vozdvizhenka AB in the Soviet

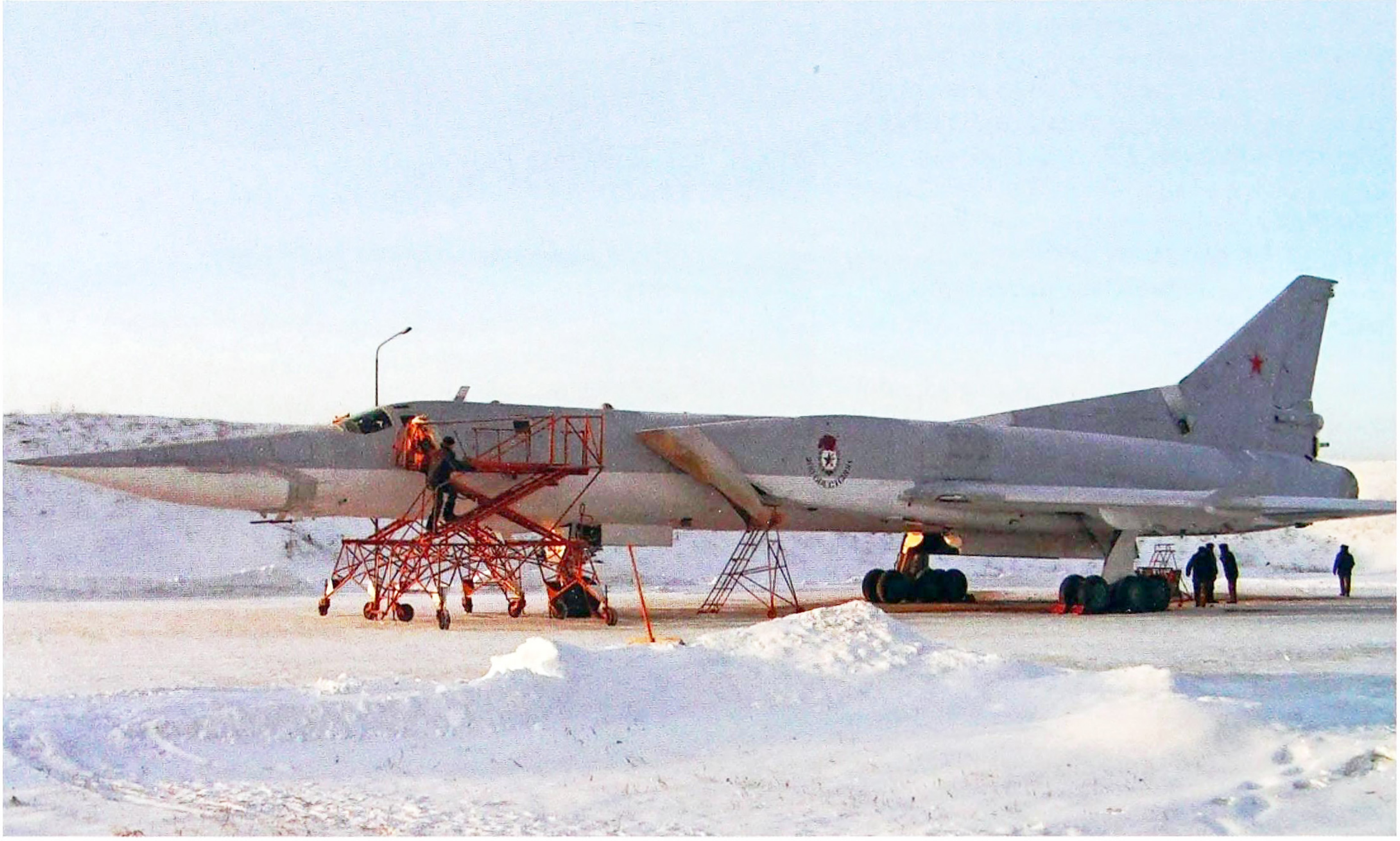
The crew of a 200th GvTBAP Tu-22M3 prior to a mission.



A 200th GvTBAP Tu-22M3 taxies with a single Kh-22N missile.

Far East, began its conversion to the Tu-22M3. The first *Backfire-C* delivered to the unit was received on 19th November. A week earlier the personnel had departed Vozdvizhenka to take conversion training; the crews of Squadron 1 mastered the type in Orsha (Belorussia), while Squadron 2 did so in Poltava (the Ukraine). Meanwhile, the Tu-22M3s being ferried to the Far East were placed in storage pending arrival of the crews.

This Tu-22M3 seen at Belaya AB wears the Guards badge and the legend '200 Brestskiy' below it.



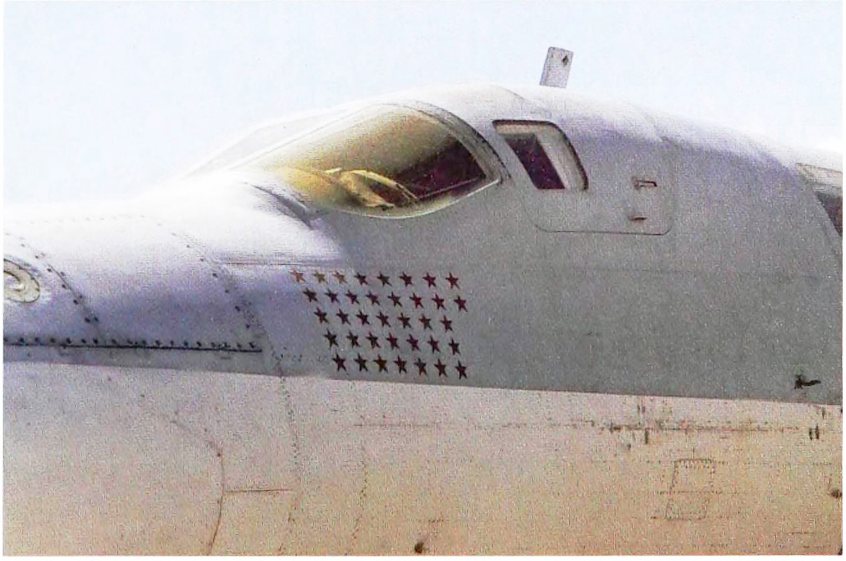
'31 Red', another 200th GvTBAP *Backfire-C*.

The unit's first sortie on the new type was made on 18th February 1991 by captain Lt.-Col. D. I. Sigarev, co-pilot Maj. V. G. Pukhov, navigator Maj. V. G. Vettsel' and WSO Maj. G. A. Koshevarov. The regiment's new aircraft arrived when the country was in a state of disintegration and chaos. These 'new' aircraft were in fact far from new and were scrounged from far and wide across the former Soviet Union: Estonia, Belarus and the Ukraine. Some of the bombers were Afghan War veterans; in fact, one of regiment's Tu-22M3 still carries Afghan War mission markers on its fuselage. On six of the Tu-22M3s 'exiled' to Primor'ye the engines has completely run out of service life, making the aircraft inoperable. Often only four or five of the unit's aircraft remained airworthy. As if it were not enough, the technical problems were compounded by the tell-tale human factor – to be precise, the shortage of qualified personnel; 31 of the regiment's officers, including ten pilots and navigators/WSOs, had left to pursue their careers in the Ukraine, Belarus, Kazakhstan and the Baltic States. Within 12 months, two deputy COs, all squadron commanders and their assistants, and the majority of the individual aircraft captains had had to be replaced.

Despite the host of problems, the unit's personnel mastered the new equipment within a fairly short time. On 24th April 1992 two crews (first crew, captain Lt.-Col. G. S. Ivanov, co-pilot Capt. I. Z. Gnezdilov, navigator Capt. A. I. Kopylov and WSO Maj. S. G. Lutoshkin; second crew, captain Capt. S. M. Filonov, co-pilot Lt. (SG) A. G. Lyakhovets, navigator Maj. I. G. Radkevich and WSO Lt. (SG) A. S. Shklyar) performed practice launches of missiles. Lt.-Col. Ivanov's crew launched the missile in supersonic flight; Capt. Filonov's crew did so in subsonic flight. The first launches were made at the GNIKI VVS target range in Akhtoobinsk, the aircraft operating from Shaikovka AB.

In the 1990s the intensity of flight operations in the regiment and the crews' annual

This 444th TBAP Tu-22M3 sports no fewer than 37 mission markers.



В ЗНАМЕНИ - ЧЕСТЬ В ОРУЖИИ - СИЛА
АВИАБАЗА
ВОЗДВИЖЕНКА

The main gate at Vozdvizhenka AB. 'Honour is in the banner, power is in the weapons.'

444
ТБАП
1941
2001
60
ЛЕТ

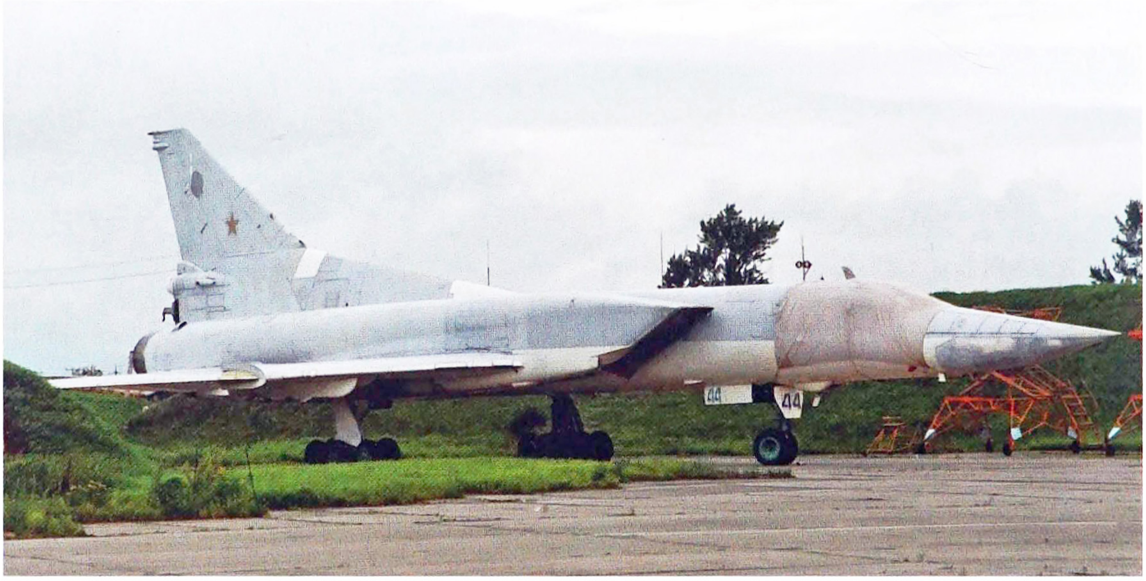
Two badges of the 444th TBAP; the upper one marks its 60th birthday.

444
ТБАП
19
41
В ЗНАМЕНИ-ЧЕСТЬ В ОРУЖИИ СЛАВА
БЕРЛИНСКИЙ

flight hours declined sharply; often the combat training plan remained unfulfilled. The shortage of jet fuel was the primary reason for this. On average the pilots logged a mere 10-15 flight hours per year, and even that was on Tu-134UBL trainers, not on the real thing.

During the reform of the Air Force pursuant to the directives of Russia's 1st Deputy Minister of Defence dated 29th January 1997, the Russian Air Force Commander-in-Chief dated 14th February 1997 and the Commander of the Long-Range Aviation dated 24th February 1997, the 444th and 132nd Heavy Bomber Regiments were merged into the 444th TBAP, the new unit taking over the honorary appellation and regalia of the 132nd TBAP. The regiment's full official name was as follows: 444th Berlinskiy Bomber Regiment decorated with the Kutuzov Order (3rd Degree) and the Aleksandr Nevskiy Order.

By the end of the 1990s a positive tendency was felt: flights became more frequent, and the Air Force began conducting exercises on a strategic scale again. Thus, on 6th-8th



444th TBAP Tu-22M3s have blue codes, as exemplified by '44 Blue'.

The 444th TBAP flight line at Vozdvizhenka AB.

444th TBAP Tu-22M3 '27 Blue' runs up its engines prior to take-off, raising a cloud of nitrous oxide tinted smoke.

October 1998 the 37th VA held a command/staff exercise in the course of which two 444th TBAP Tu-22M3s flew a mission over the Sea of Japan. In addition to regular bombers, the regiment also operated the rare Tu-22MR specialised reconnaissance aircraft, therefore the practical value of the regiment's operations for the Russian military increased hugely. In 2000 during a command/staff exercise held on 18th-21st April, the 444th TBAP *Backfires* flew over the Black Sea.

In 2002 following the summing-up of the year's combat training results, the regiment was declared the best in the 37th Air Army.

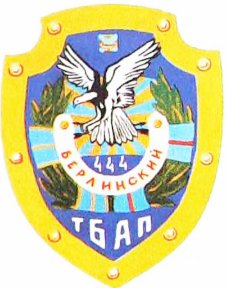
In April 2004 a pair of 444th TBAP *Backfire-Cs* (captained by deputy regiment CO Lt.-Col. A. A. Yeremchev and commander of Squadron 2 Lt.-Col. S. S. Yermakov) flew along several islands of the Japanese Archipelago on the Pacific side. On the way back one of the aircraft accurately delivered a load of practice bombs on the target at a range located in Primor'ye. The first flights in the vicinity of Japan after a long pause sometimes caught the Japanese Self-Defence Forces off guard.

Over the years the 444th TBAP was commanded by the following people:

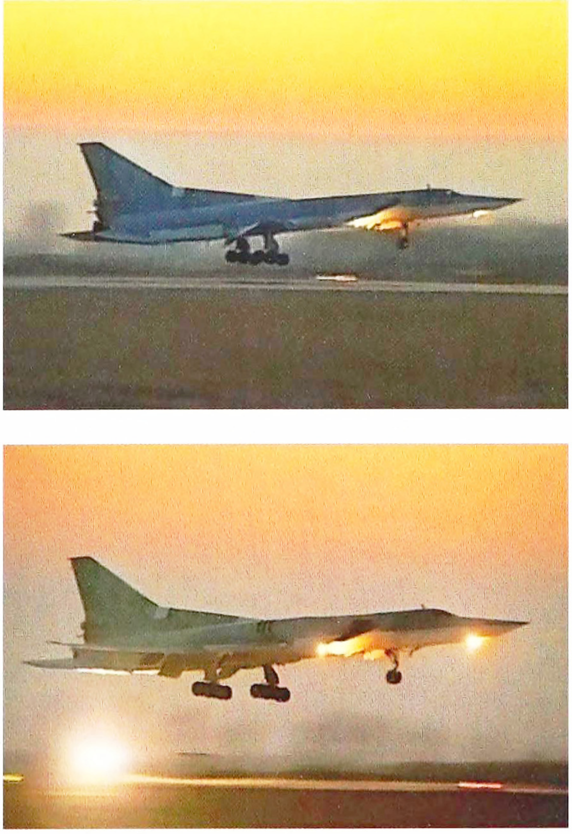
Lt.-Col. A. M. Gorislavets (from 1989);
Col. Yu. T. Kalmykov (from 1993);
Col. N. V. Bushooyev (from 1998);
Col. I. V. Konarev (from 2001).

203rd *Orlovskiy* GvOAPSZ

The Ilyushin IL-78 *Midas-A* refuelling tanker was added to the Soviet Air Force inventory in 1984, entering service with the 409th SAP (***smesh****annyy* ***avia****polk* – Composite Air Regiment) based in Uzin near Kiev. When the Ukraine declared independence in 1991 and began haggling over the ex-Soviet assets with Russia, the Ukrainian party was more interested in the IL-78 fleet than in the Tu-160s and Tu-95MSs taken together. Fact is, having declared itself a non-nuclear state, the Ukraine did not need strategic bombers and hence tankers to support them; however, the IL-78s



The unit badge of the 444th *Berlinskiy* TBAP.



Backfire-Cs coming home at dusk.

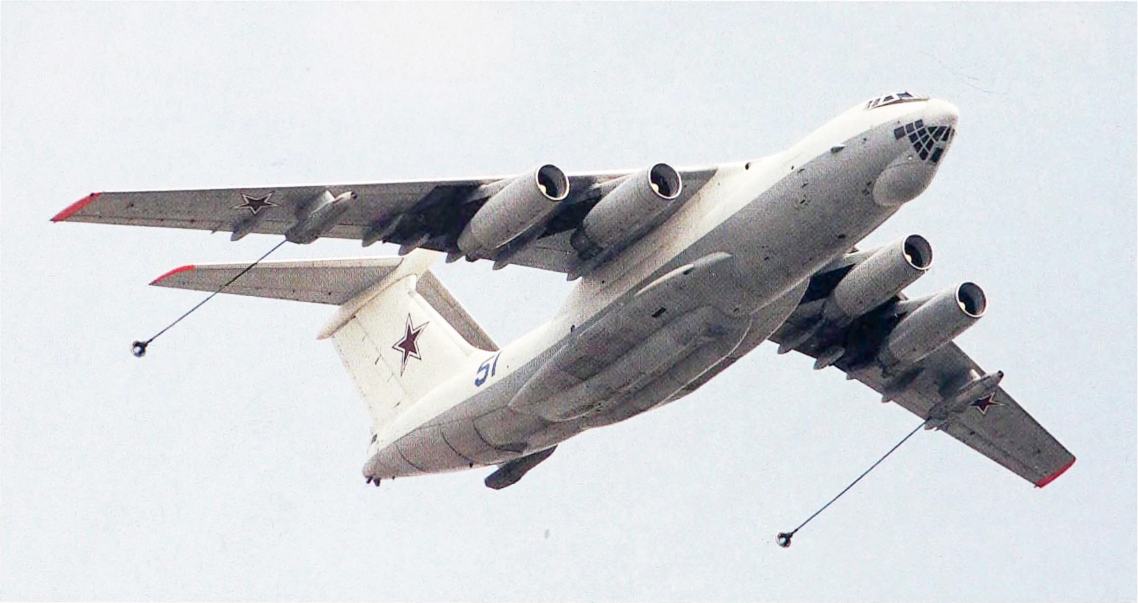
203
ОРЛОВСКИЙ
А.П.(о-з)

The shoulder patch worn by 203rd GvOAPSZ personnel.

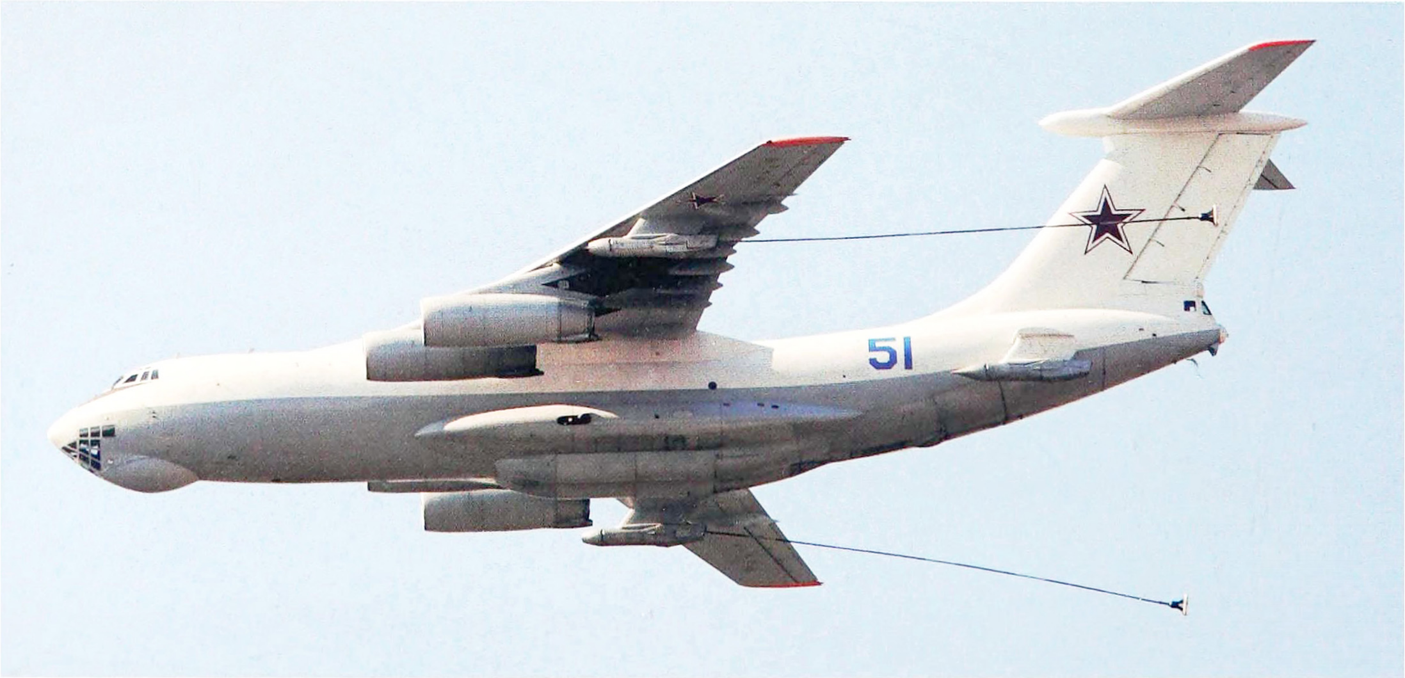
sans suffixe operated by the 409th SAP could be easily adapted to the transport role by removing the fuel tanks in the cabin, and transport aircraft could constantly generate income. As a result, there were no IFR tankers left in the Ukraine – part of the IL-78 fleet was stripped of mission equipment and converted to transports for use by the Ukrainian Air Force's commercial branches, and the rest have been sold abroad. Thus Russia, too, was left without any tankers and had to create its tanker force anew. The Myasishchev 3MS-2 *Bison-B* and Tupolev Tu-16N *Badger-A* tankers which Russia inherited from the former superpower had become both outdated and physically worn out by the 1990s; therefore the TAPO aircraft factory in Tashkent (Uzbekistan) had to manufacture 20 new-build IL-78s – mostly IL-78M *Midas-B* dedicated (non-convertible) tankers. Production of the IL-76 family virtually ground to a halt due to economic troubles and it was not possible to build more tankers, and the final IL-78M was handed over to the Russian Air Force in 1992. All these tankers were delivered to the 1230th APSZ which had been established back on 1st October 1955 and was based in Engels. In the Autumn of 1991 the regiment was reformed to become the 203rd GvAPSZ.

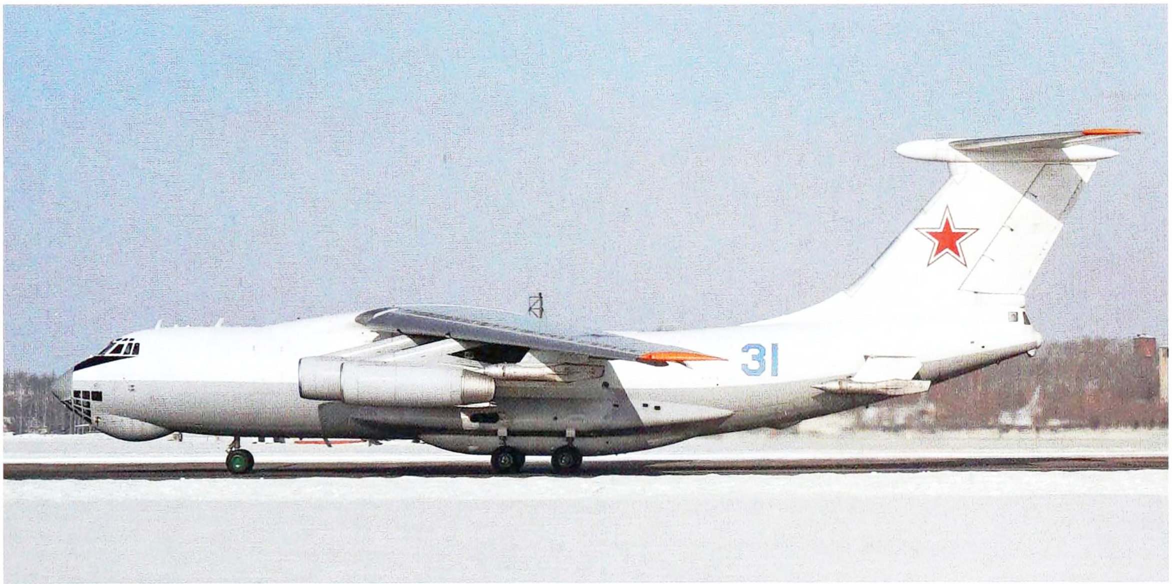
In 1995 the 203rd regiment was tasked with providing in-flight refuelling primarily for Tu-95MS strategic missile carriers and conducting research work on refuelling Tactical Aviation and Air Defence Force aircraft (fight-

A badge of the 203rd *Orlovskiy* GvOAPSZ.



'51 Blue', a 203rd GvOAPSZ IL-78M tanker, trails the drogues from the two outer UPAZ-1 hose drum units used for refuelling tactical aircraft.

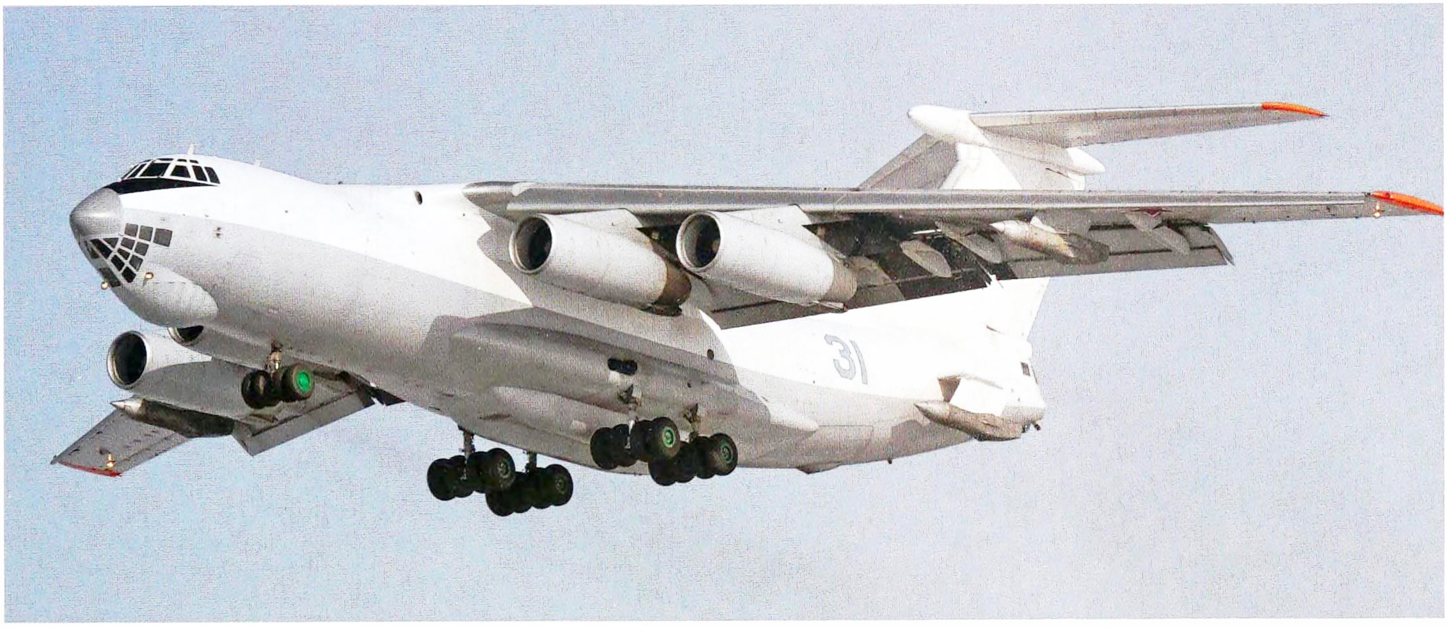


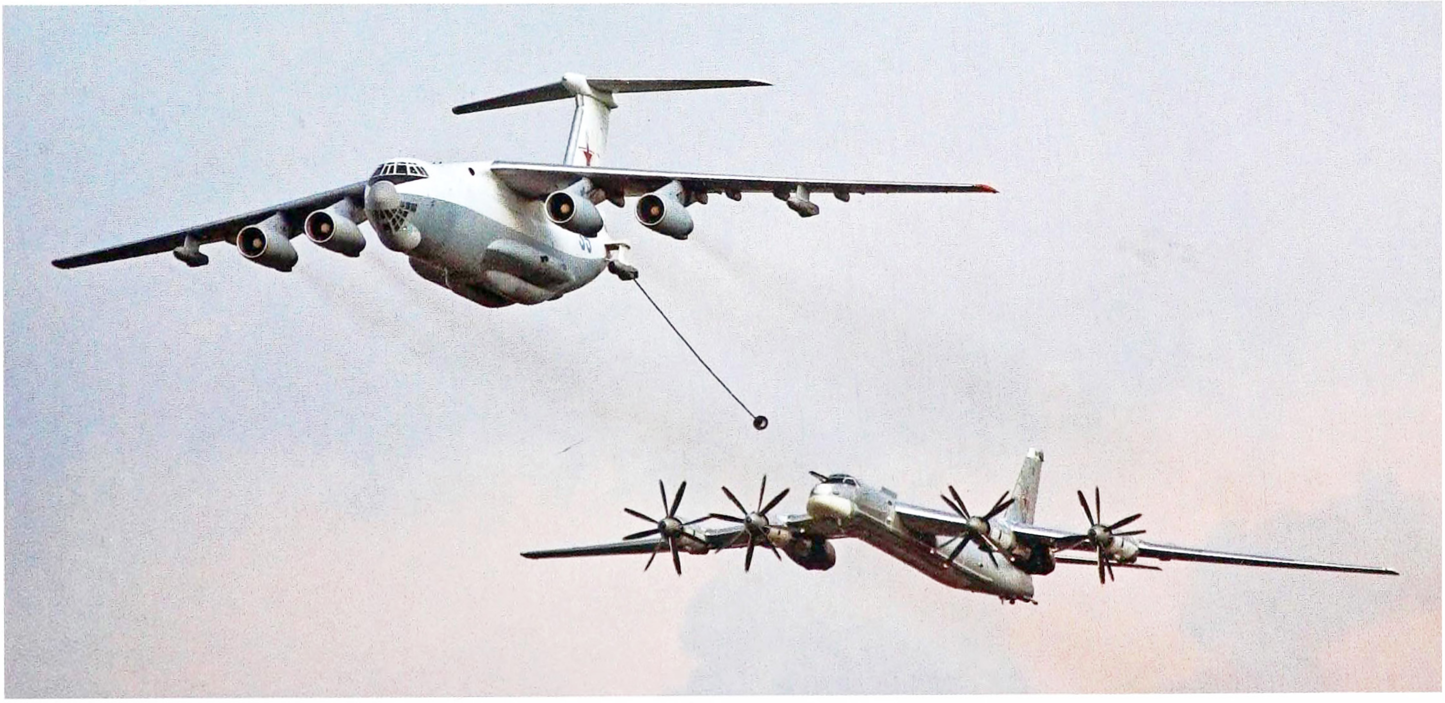


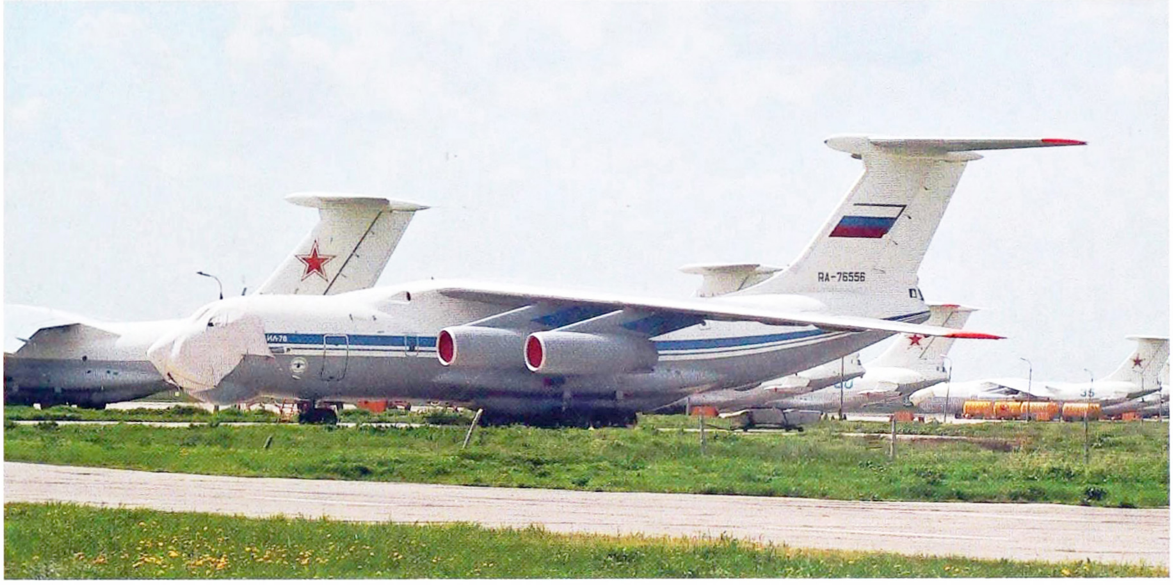
IL-78M '31 Blue' looks resplendent as it completes its landing run at Dyagilevo AB.

The same aircraft seen immediately after take-off.

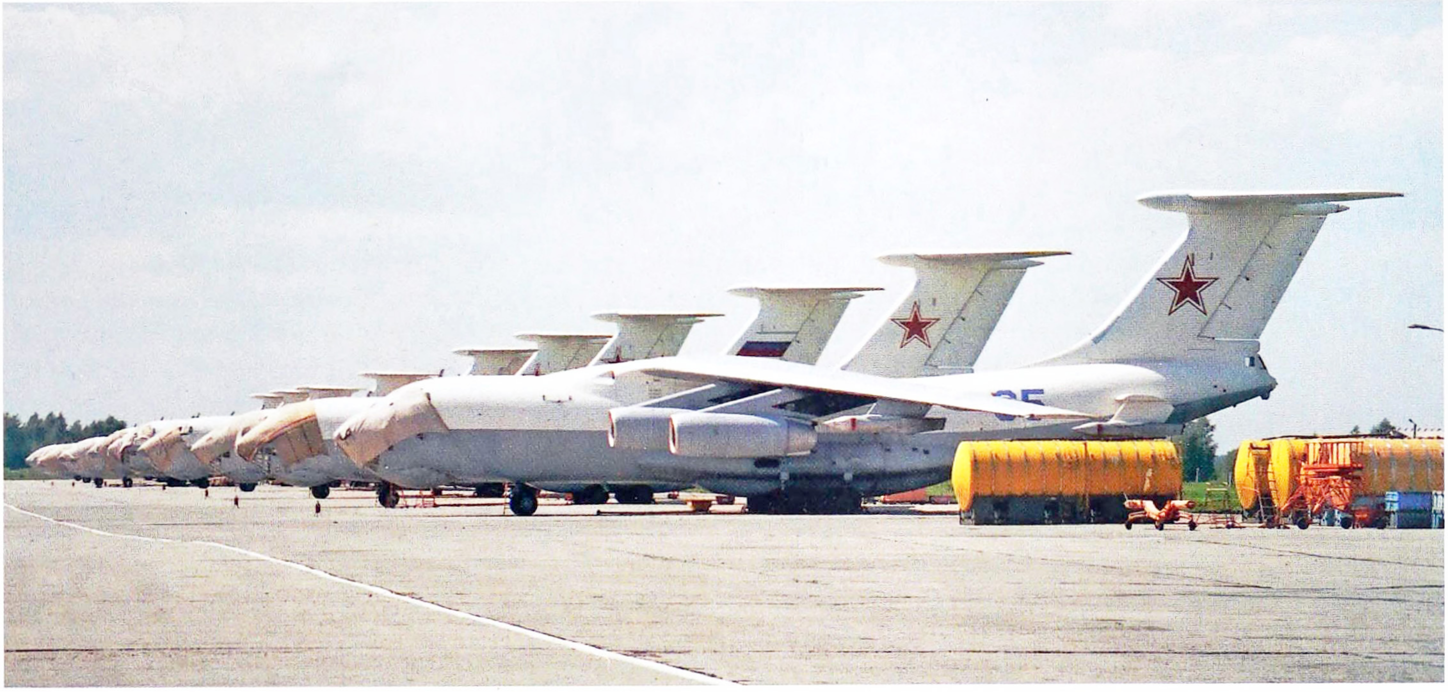
A Tu-95MS formates with IL-78M '35 Blue' in a simulated refuelling.

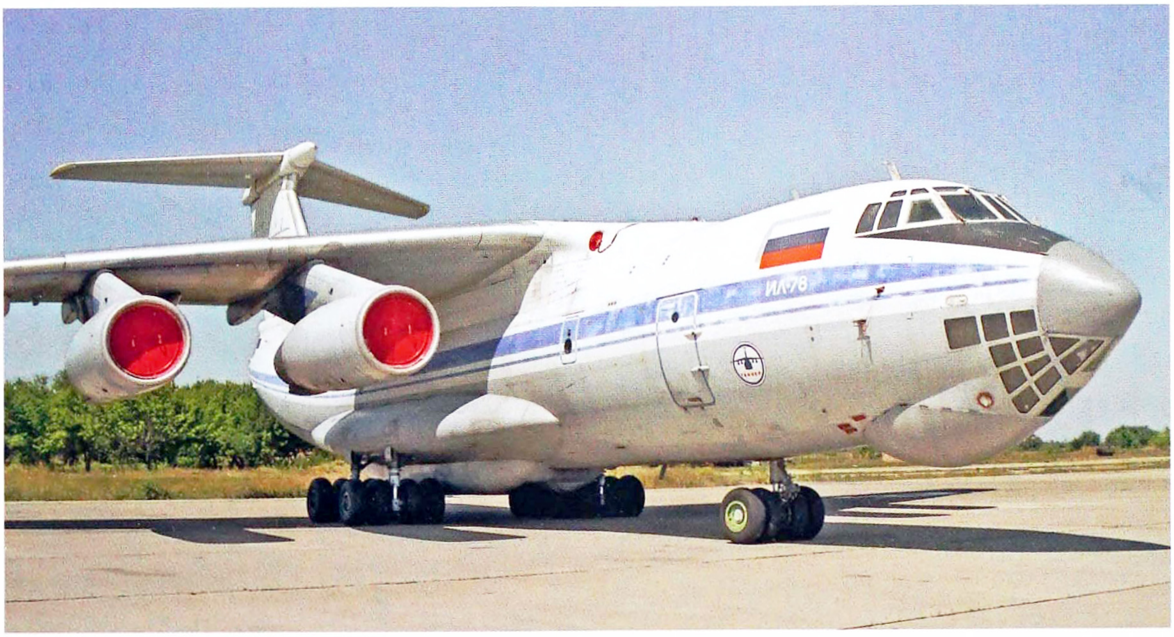






The mascot of the 203rd GvOAPSZ – an owl.





The 203rd GvOAPSZ flight line at Dyagilevo AB, Ryazan'. The yellow drums are the IL-78's removable fuel tanks.

Top and left: The IL-78 prototype, RA-76556, has also been delivered to the unit.

Opposite page: The 203rd GvOAPSZ celebrates its 65th birthday in 2006.

IL-78M '31 Blue' retracts its landing gear after take-off.

ers and tactical bombers). In the course of this research work the tankers operated from the northern airbase in Pravdinsk where MiG-31 interceptors were based and Tret'yakovo airfield in Lukhovitsy (the factory airfield of a branch of the RSK MiG corporation).

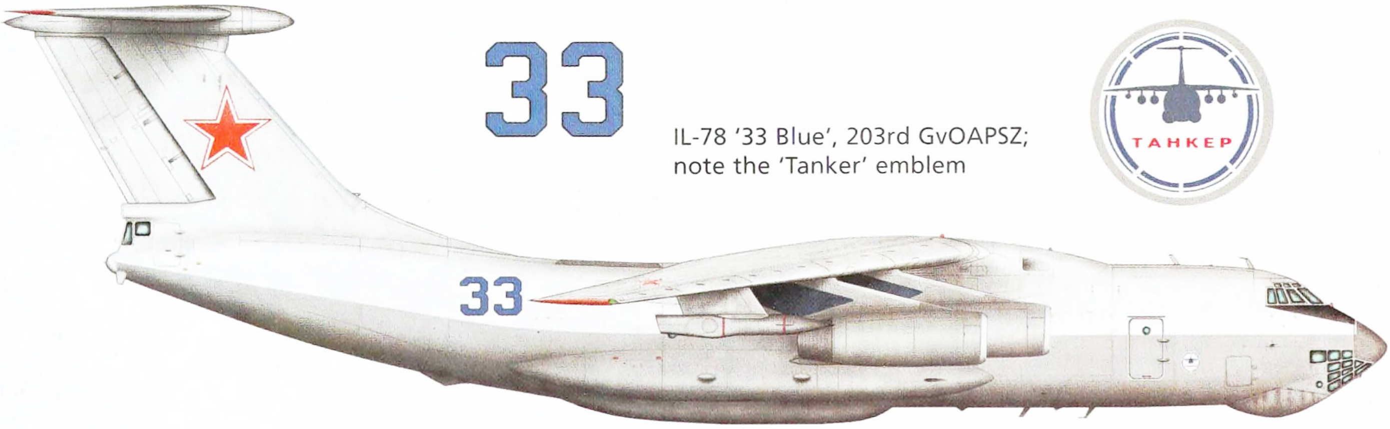
On 9th May 1995 an IL-78M took part in the flypast over Poklonnaya Gora in Moscow at the Victory Day 50th anniversary parade captained by Guards Maj. M. A. Malov (the crew also included instructor pilot Guards Lt.-Col. V. M. Stavchikov). That same day another air parade on occasion of the Victory Day 50th anniversary took place in Nizhniy Novgorod; it included two IL-78s captained by Guards Maj. V. V. Grigor'yev and Guards Maj. V. N. Kosenkov. In the course of 1995 the regiment's crews made 102 fuel transfers, and this number was more than doubled the following year. The tankers worked with Tu-95MSs, advanced versions of MiG-29 and Su-27/Su-30 fighters, and Su-24M *Fencer-D* tactical bombers. The crews headed by Guards Lt.-Col. V. A. Zabegalov (commander of Squadron 2) and Guards Maj. Rubtsov took part in a command/staff drill of Russia's strate-

IL-78 *sans suffixe* '34 Blue' on final approach with the flaps fully deployed.

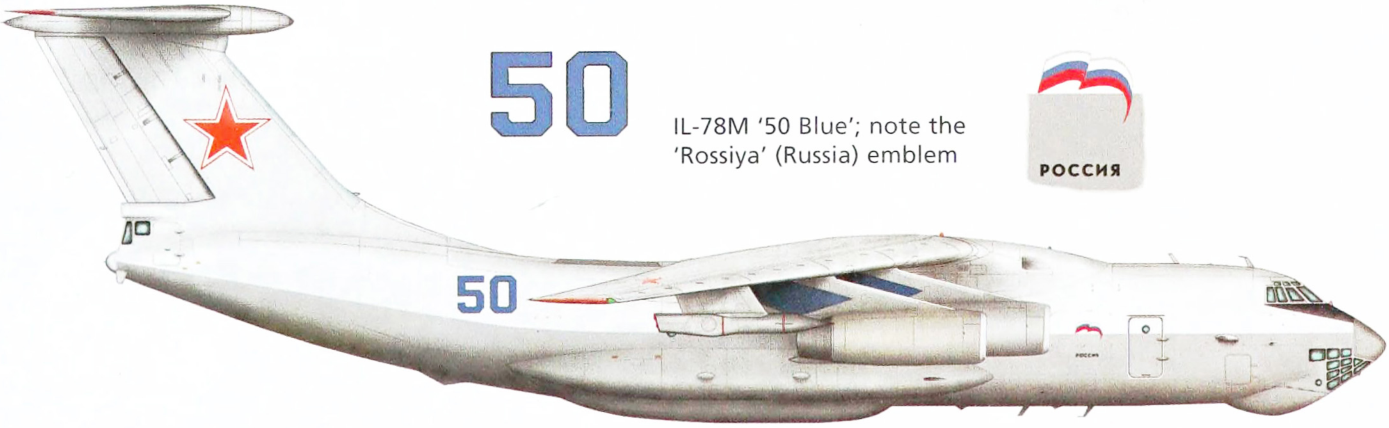
gic nuclear forces, providing in-flight refuelling for Tu-95MSs of the 182nd GvTBAP. However, in 1997 it proved possible to make far fewer flights. In January-February 1997 some IL-78s *sans suffixe* with the internal fuel tanks temporarily removed made 26 transport flights from Chkalovskaya AB near Moscow to Noril'sk; in contrast, only a handful of refuelling missions were flown with Tu-95MSs from Mozdok and various development aircraft at the Russian Air Force's 929th State Flight Test Centre in Akhtoobinsk (again, Su-27s, Su-30s and Su-24Ms were involved). In 1998-99 the unit polished the technique of refuelling tactical aircraft, and in 1998 five 203rd GvAPSZ crews took part in Exercise *Redoot-98*, refuelling Tu-95MSs.

In 2000 the Air Force command ordered the regiment to change its home base from Engels-2 to Dyagilevo AB in Ryazan'. The 'vanguard' of the regiment arrived in Ryazan' in April to prepare the ground, and on 30th May the first *Midas* – IL-78 *sans suffixe* RA-78782 captained by Guards Maj. M. A. Malov – touched down at Dyagilevo. It was followed immediately by IL-78M CCCP-78823 captained by Guards Maj. S. V. D'yakov (the crew included the regiment CO Guards Col. V. V. Prozorov as an instructor pilot). A third tanker, IL-78M '32 Blue' captained by Guards Lt.-Col. V. A. Zabegalov, landed shortly afterwards. However, the move was not all that simple – only 11 of the 20 tankers on strength were airworthy, the others being unserviceable for various reasons. Therefore the resourceful personnel had to resort to an unconventional method: once a serviceable aircraft had arrived at Dyagilevo, the equipment items necessary to make other IL-78s airworthy were removed from it, delivered to Engels and installed on other aircraft, which were then ferried to Dyagilevo, and so on. In this fashion all of the unit's aircraft were ferried. A huge contribution to the 203rd GvAPSZ's move to its new home was made by the specialists of the unit's engineering aviation service (ground personnel) and maintenance & repair facility commanded by Maj. V. G. Leonov. On 11th August the last IL-78M, '31 Blue' captained by deputy regiment CO Guards Lt.-Col. Amel'kin, took off from Engels-2 AB and made a farewell circle over the garrison, landing at Dyagilevo AB just over an hour later.

Since the move to the new base the regiment has became one of the units directly reporting to the Commander of the 37th



IL-78 '33 Blue', 203rd GvOAPSZ; note the 'Tanker' emblem



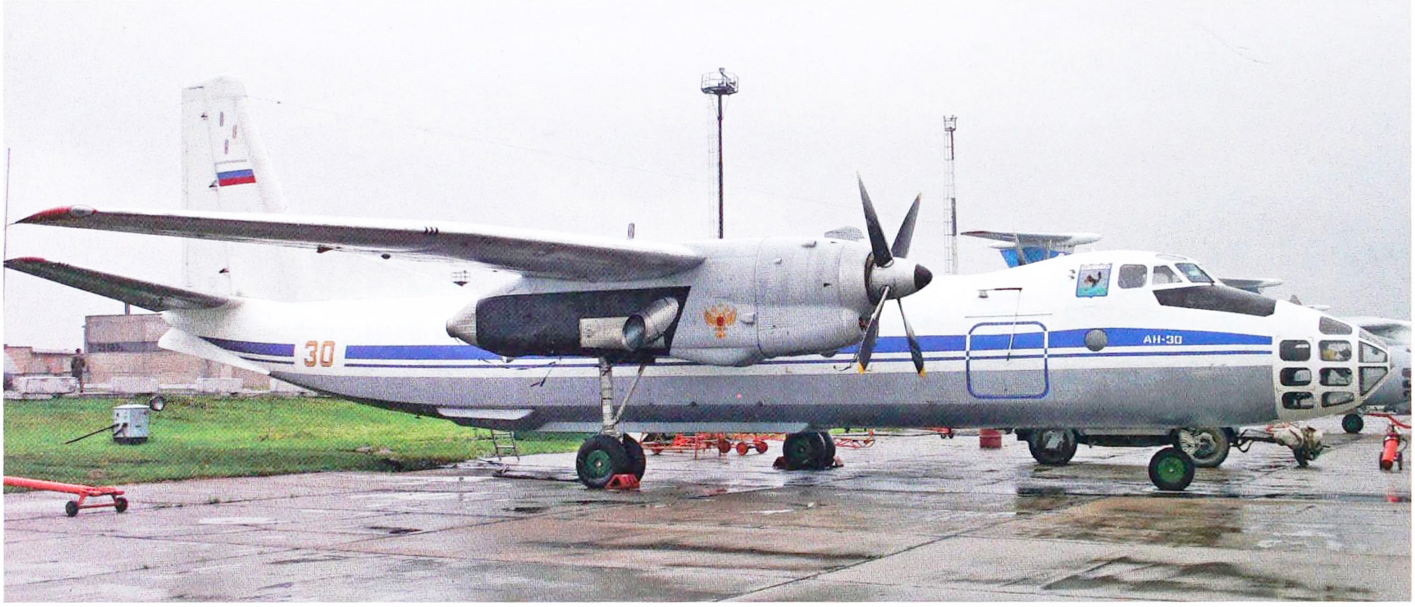
IL-78M '50 Blue'; note the 'Rossiya' (Russia) emblem

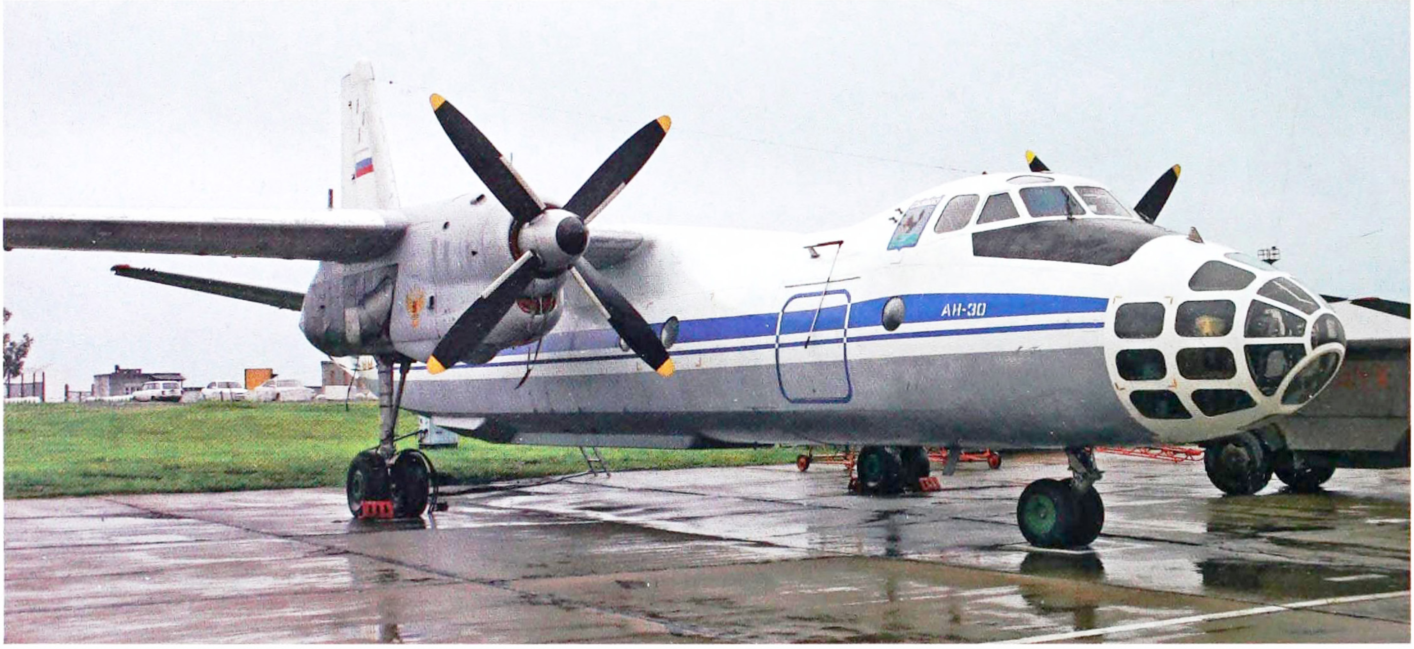
(Strategic) Air Army of the Supreme High Command, becoming the 203rd *Orlovskiy* GvOAPSZ (*Gvar**dey**skiy ot**del'**nyy avia**polk** samo**lyo**tov-za**prav**shchikov* – Guards Independent Aerial Refuelling Regiment). On 1st September 2000, in keeping with the redeployment order, the regiment started active operations from Dyagilevo.

At the new location the regiment mastered a new type of operations – refuelling of Tu-160 strategic missile carriers. Actually this procedure had been mastered in Soviet times, but the aircrews of the 409th SAP which had done it had remained in the Ukraine, therefore the 203rd GvOAPSZ had to start from scratch. In the 1990s this could not be done because the Russian Air Force simply did not have enough *Blackjacks* on strength. The first refuelling of a Tu-160 was performed by the crew of Guards Lt.-Col. Agafonov. The first night refuelling of a pair of Tu-160s took place in the Summer of 2003; interestingly, the then Minister of Defence Sergey Ivanov was on board one of missile carriers.

The 203rd GvOAPSZ occupies a special place in the Russian Air Force: it is a unique aerial refuelling regiment whose importance grows every year. No major air operation of the DA can be performed without tanker support. The services of the regiment are very sought after in the Air Force, and the tanker crews' annual flight time is surpassed only by that of the Air Force's military airlift branch (VTA). The morale of the regiment's personnel is also bolstered by the numerous research programmes in which the unit's IL-78s and

181st OAE An-30 '30 Yellow' at Irkutsk-1. Note the Russian flag on the tail instead of a star, the Irkutsk city crest aft of the flight deck and the coat-of-arms on the engine nacelle.





IL-78Ms are involved. The techniques of refuelling tactical aircraft are refined, and unique test and research work on automating IFR procedures is performed together with the Flight Technique Research Centre in Zhukovskiy which until recently was headed by the well-known test pilot Anatoliy N. Kvochur.

Over the years the 203rd GvOAPSZ has been commanded by the following people:

Colonel A. K. Zatsepin (from 1992);
Colonel N. K. Matusevich (from 1995);
Colonel V. V. Prozorov (from 1998);
Colonel D. L. Kostyunin (from 2004).

181st OAE

The story of the 181st OAE (*ot**del’**naya **a**viaeskad**ril’**ya* – Independent Air Squadron) began on 15th December 1933, when the 3rd Photo Mapping Air Detachment was established at Krasnaya Rechka (= Red River) airfield near Khabarovsk in the Far East.

In 1980 the unit, then known as the 151st OAE, was transferred from the Air Force component of the Siberian Military District to the 30th Air Army of the Supreme High Command (that is, to the Long-Range Aviation).

The unit participated in the Afghan War. In 1982 a number of 151st OAE Antonov An-30 photo survey aircraft were deployed to Kandahar and Shindand, flying photo reconnaissance missions for the 40th Army (the Soviet military contingent in Afghanistan).

In May 1998 the squadron, now designated 181st OAE, was brought into the 37th (Strategic) Air Army of the Supreme High Command. Apart from An-30s, it operates An-12 and An-26 transports. It is based at Irkutsk-1 airport.

In September 1999 three of the squadron’s An-30s participated in the Russian Army’s anti-terrorist operation in the North Caucasus (the Second Chechen War).

Over the years the 181st OAE was commanded by the following people:

V. A. Sorsunov (from 1987);
O. A. Zadora (from 1998);
Colonel A. Sheremet.

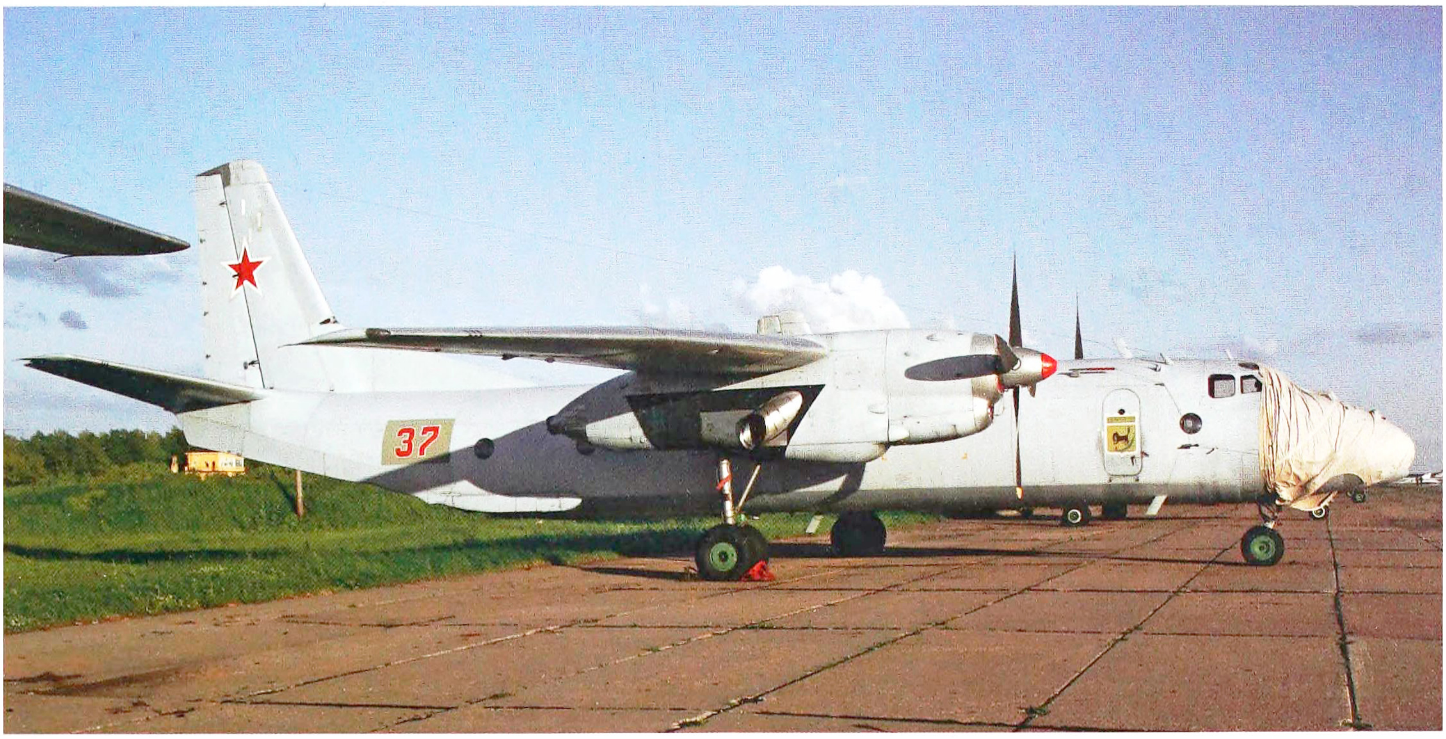
43rd TsBP i PLS (DA)

The history of the Long-Range Aviation’s 43rd Combat Training & Aircrew Conversion Centre (TsBP i PLS – *Tsentr boye**voy** podgo**tov**ki i pere**oo**chivaniya **lyot**novo sos**ta**va*) dates back to 18th September 1940, the day when the National Defence Committee issued an order establishing the 1st Higher School of Navigators of the Red Army Air Force at Dyagilevo airfield near Ryazan’. From then on, virtually all pilots and navigators of the Soviet, and subsequently Russian, Long-Range Aviation took their initial training (or conversion training) for new bomber types at this Centre.

The next wave of reorganisations that hit the 43rd Centre was brought about by the disintegration of the Soviet Union. Back in 1990 the structure of the 43rd TsBP i PLS was expanded to include the Red Banner Centre of the Air Force situated in Kansk, which was engaged in training of air gunners. In 1992 a

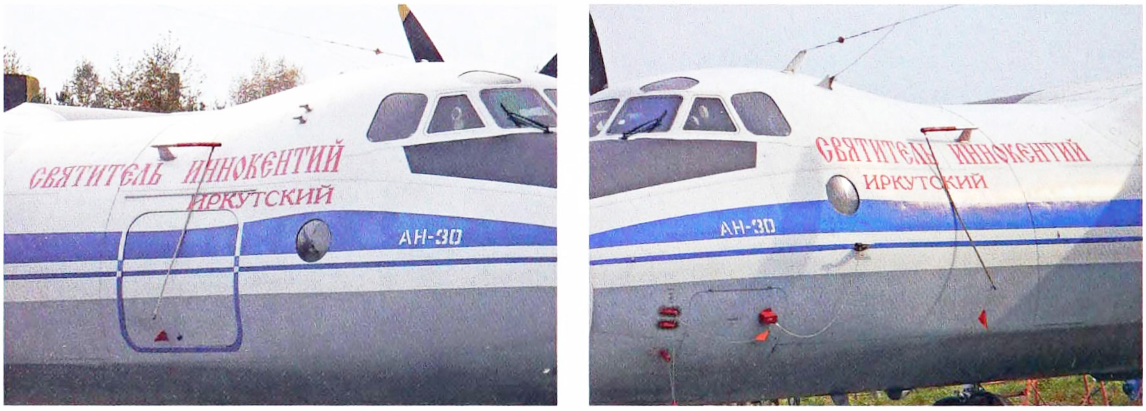
70
1933
2003

A badge marking the 70th anniversary of the 181st OAE in 2003.



The 181st OAE also operates this An-26, ‘37 Red’ with a faded Irkutsk city crest on the entry door.

Mechanics at work on the starboard engine of a 181st OAE An-30.

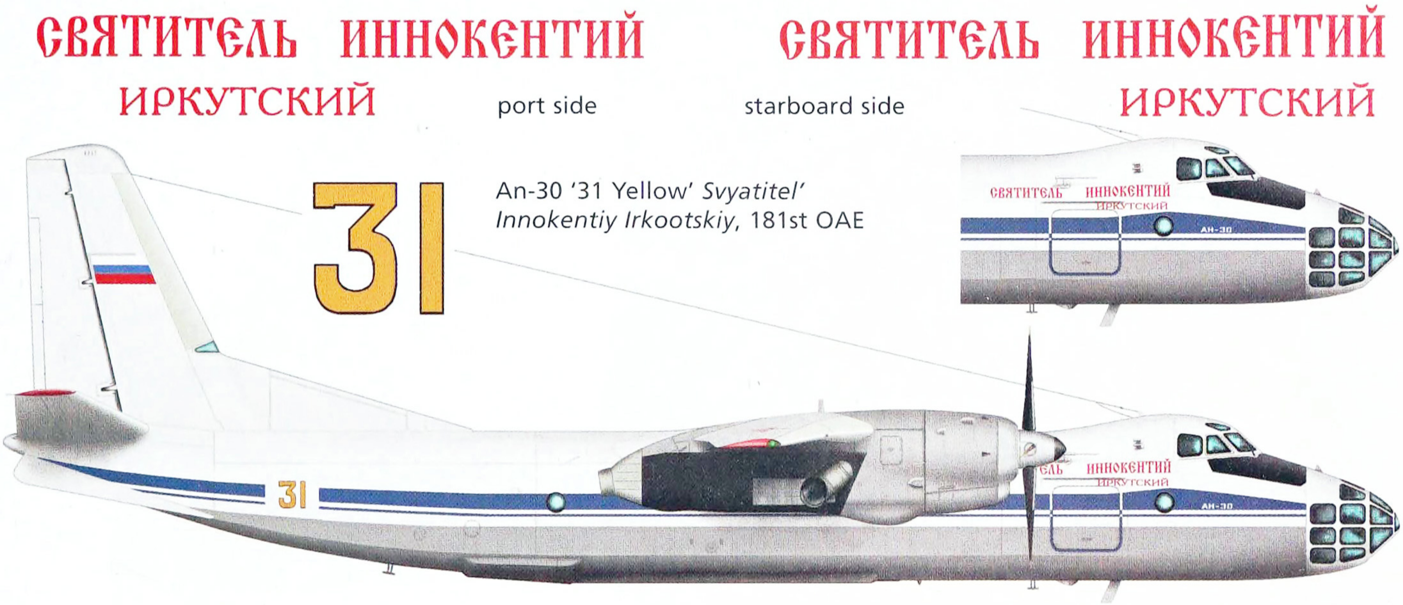

СВЯТИТЕЛЬ ИННОКЕНТИЙ
ИРКУТСКИЙ
АН-30

One of the unit's An-30s, '31 Yellow', is named *Svyatitel' Innokentiy Irkootskiy* (Sanctifier Innokentiy of Irkutsk).

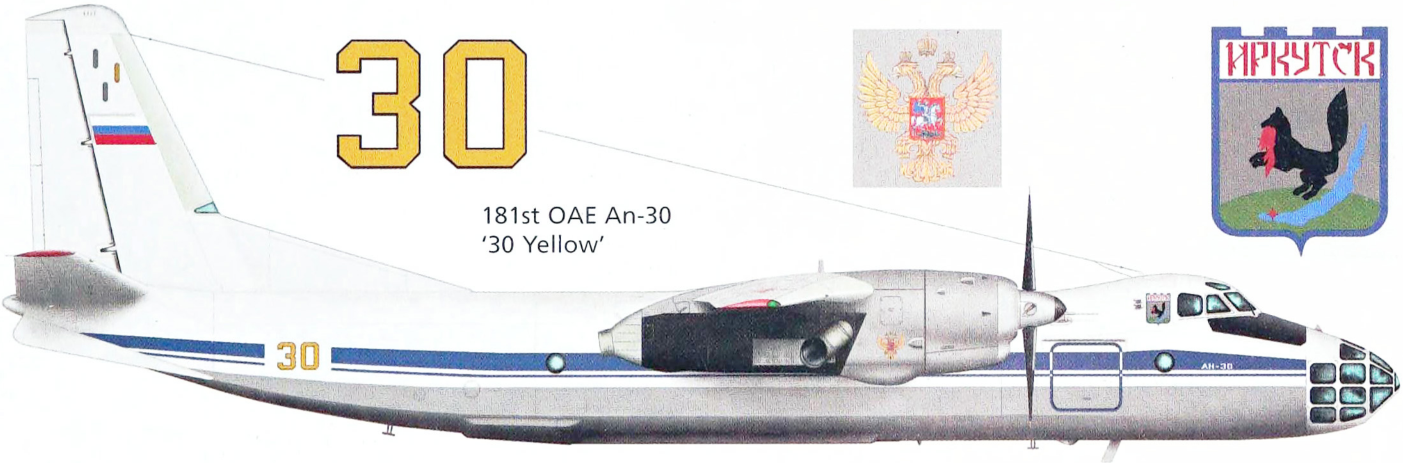
СВЯТИТЕЛЬ ИННОКЕНТИЙ
ИРКУТСКИЙ
АН-30

An-30 '31 Yellow' after the consecration ceremony at Irkutsk with airmen and Russian Orthodox priests.

Opposite page: Another view of 181st OAE An-30 '30 Yellow'.


СВЯТИТЕЛЬ ИННОКЕНТИЙ
ИРКУТСКИЙ
port side
starboard side
СВЯТИТЕЛЬ ИННОКЕНТИЙ
ИРКУТСКИЙ
31
АН-30

An-30 '31 Yellow' *Svyatitel' Innokentiy Irkootskiy*, 181st OAE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ИРКУТСК
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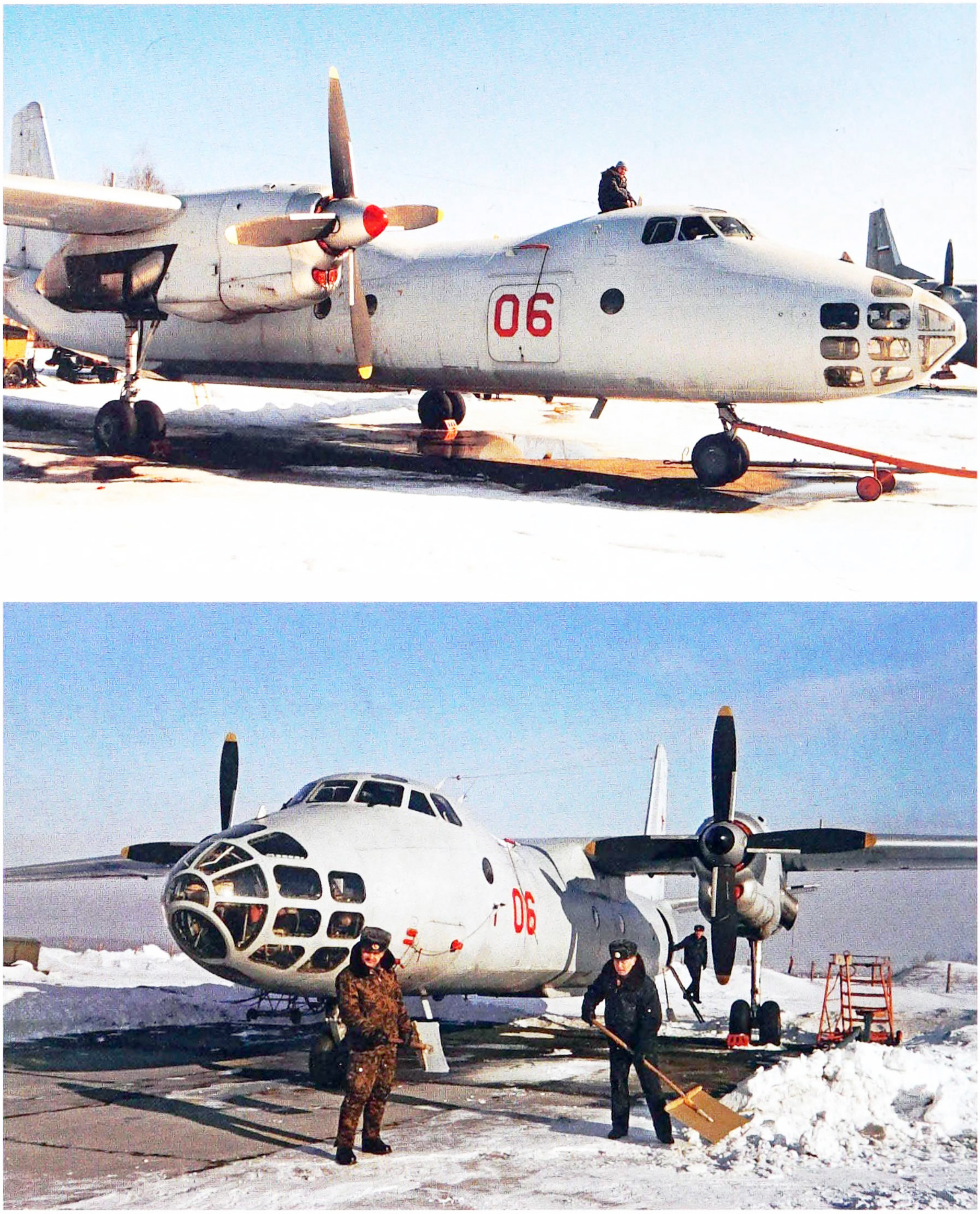
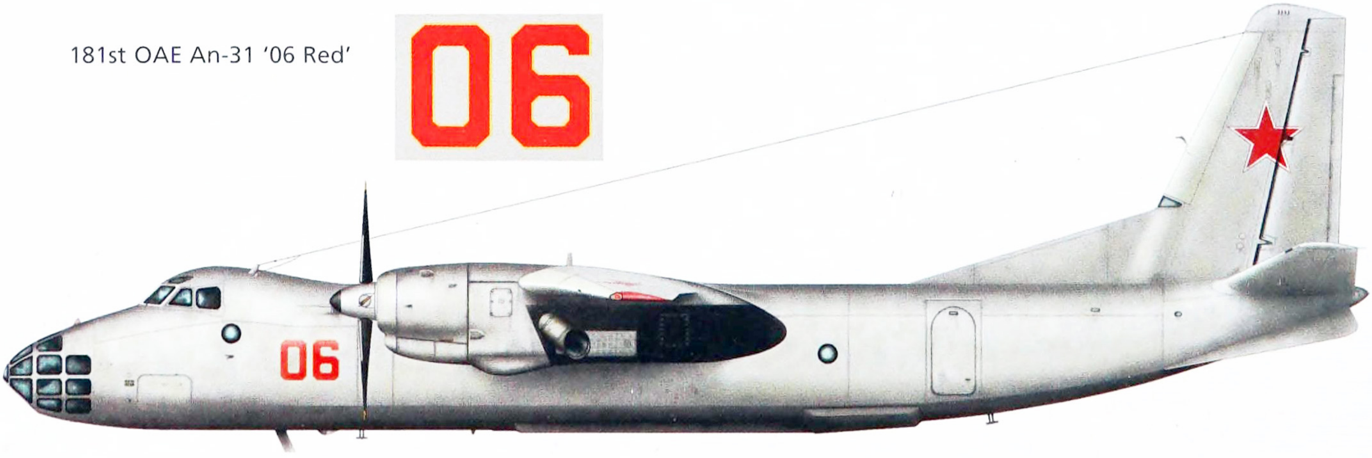
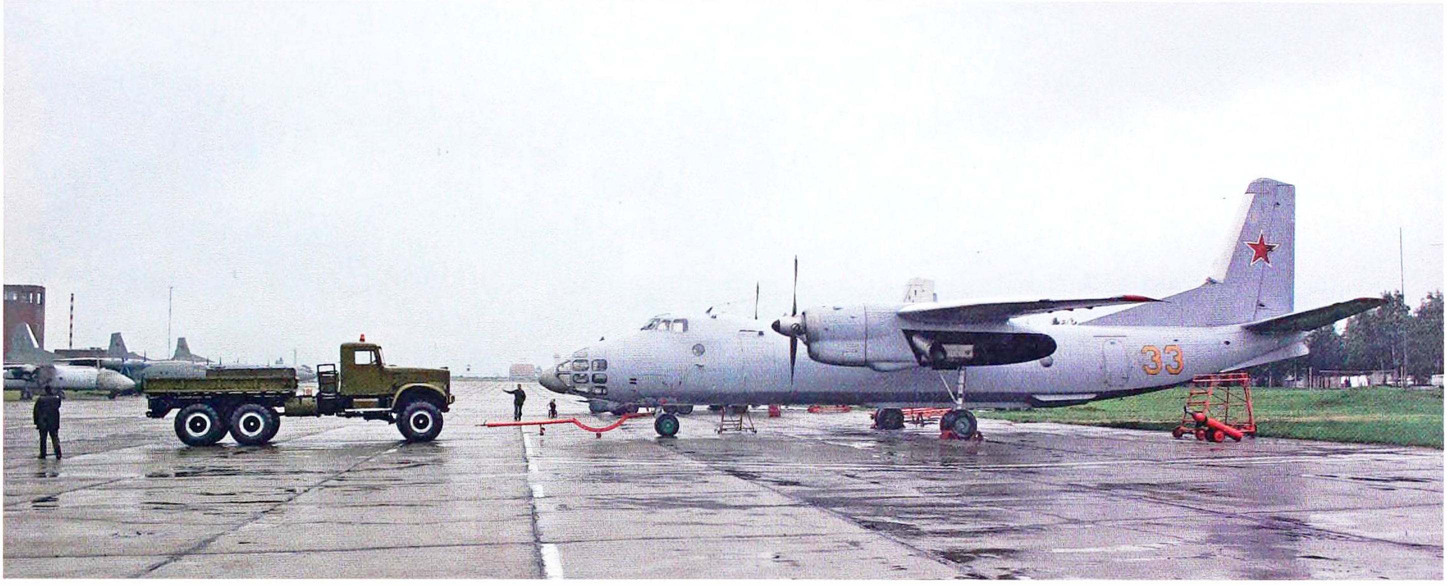
181st OAE An-30 '30 Yellow'



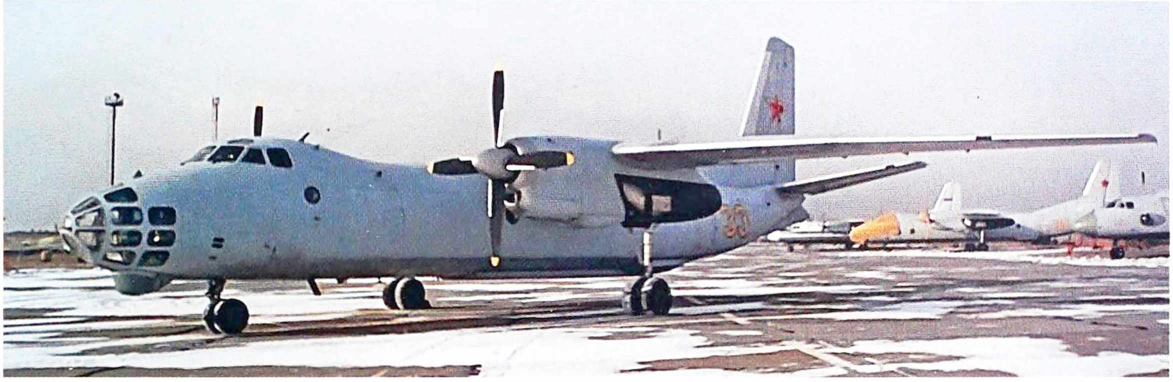
Two views of another An-30 belonging to the DA ('06 Red'). Note the unusual location of the code and the red-tipped spinners.

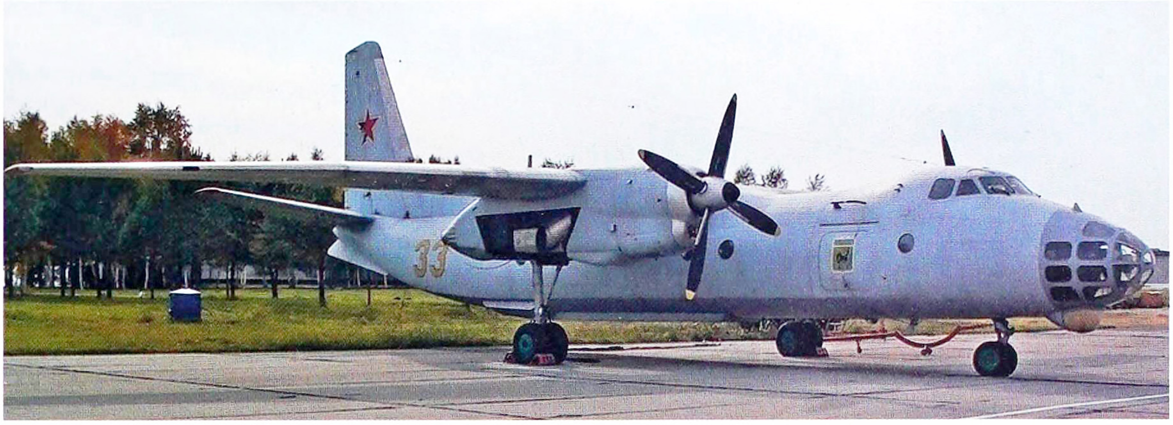
181st OAE An-31 '06 Red'



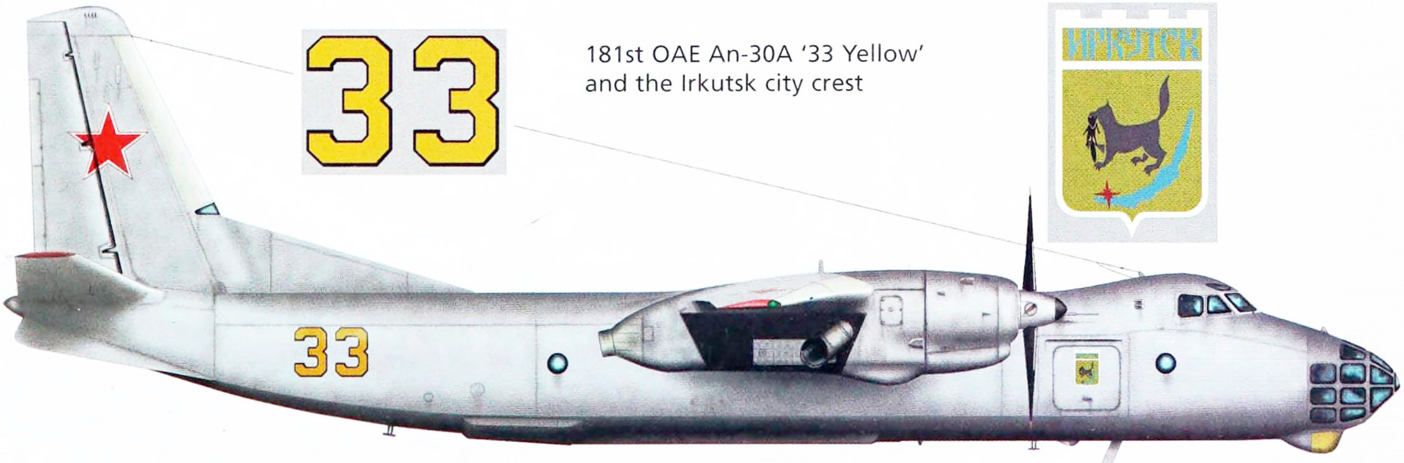


A KrAZ-255B prime mover prepares to tow a grey-painted 181st OAE An-30A coded '33 Yellow'. Note the towbar kinked to clear the chin radome.

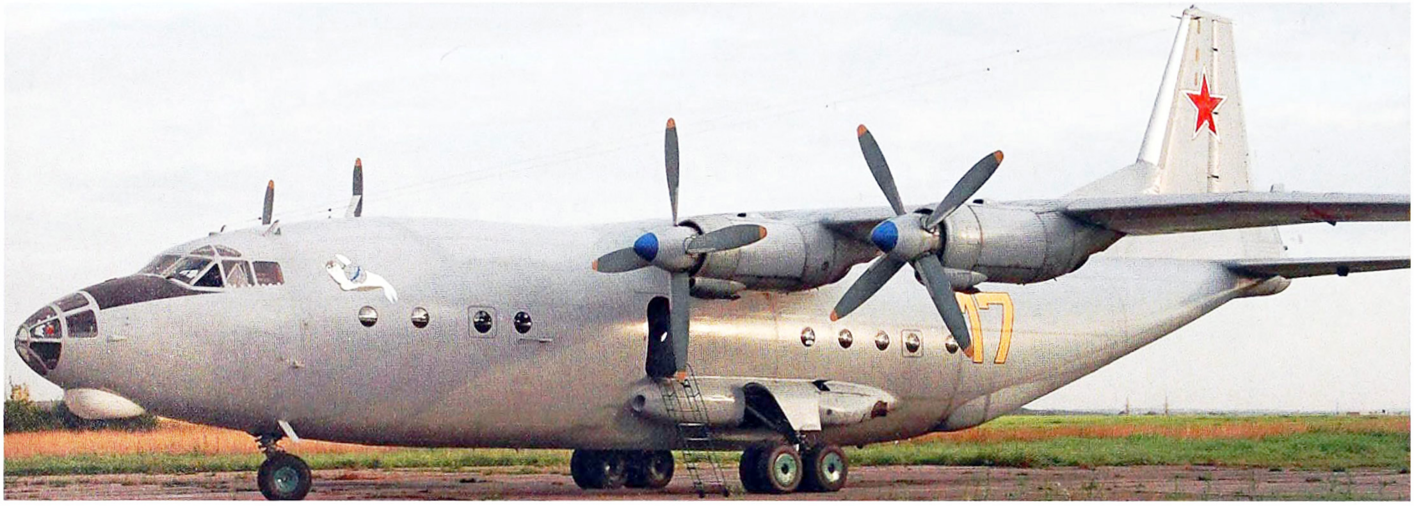




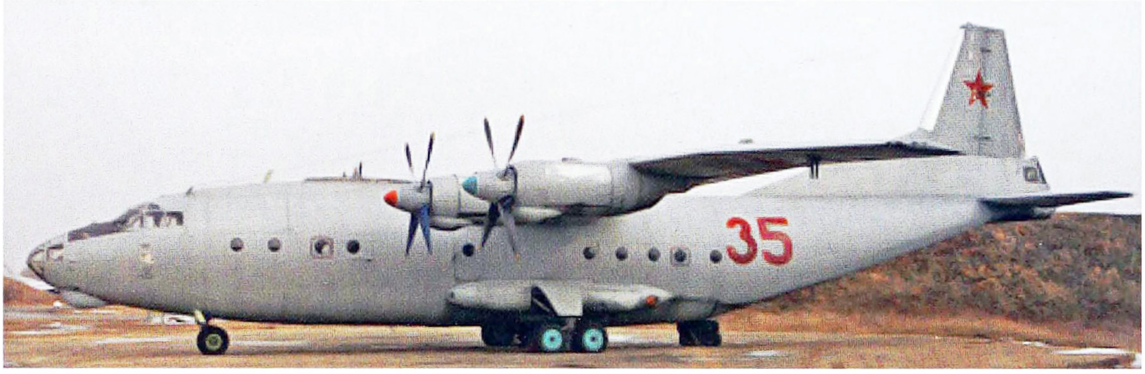
Two more views of '33 Yellow'. Note sister ship '32 Yellow' in the background.



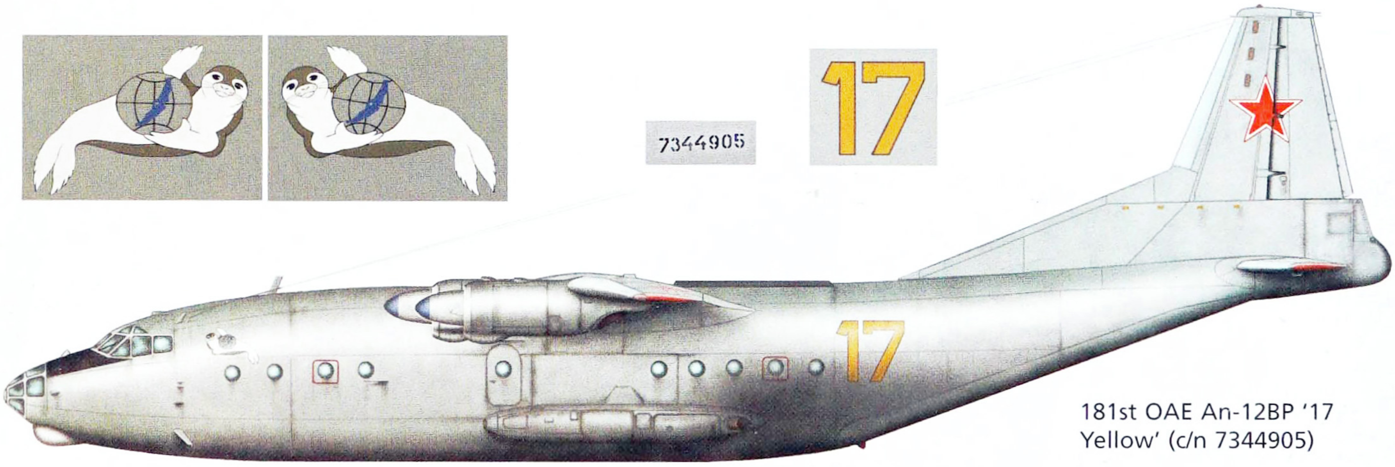
181st OAE An-30A '33 Yellow' and the Irkutsk city crest



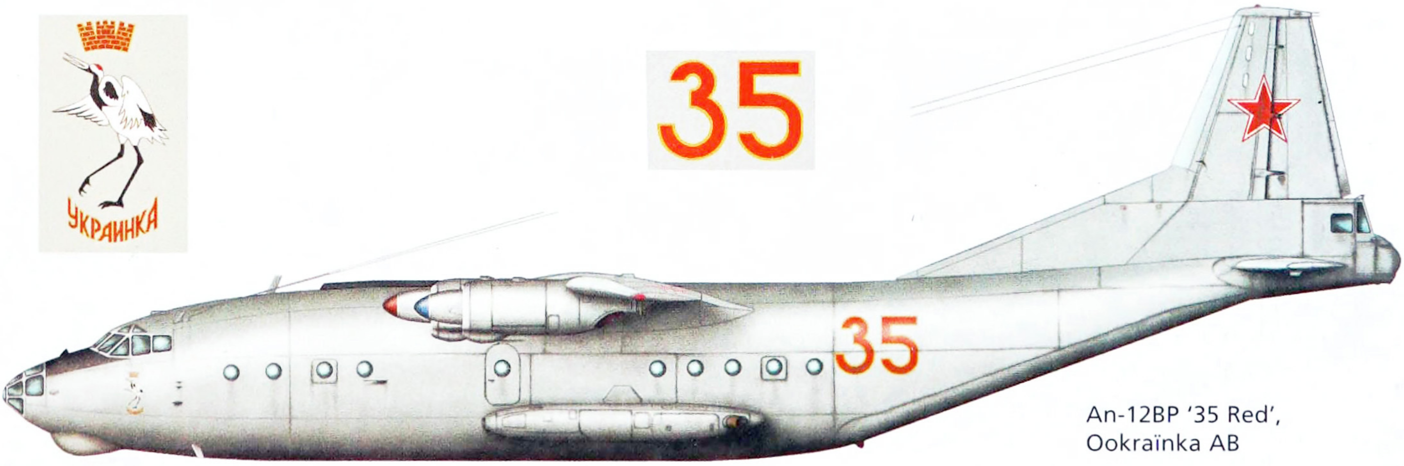
An-12BP '17 Yellow', a 181st OAE aircraft. The nose art depicts a fur seal found in Lake Baikal.



Sister ship '35 Red' is based at Ookraïnka AB; note the different spinner colours.



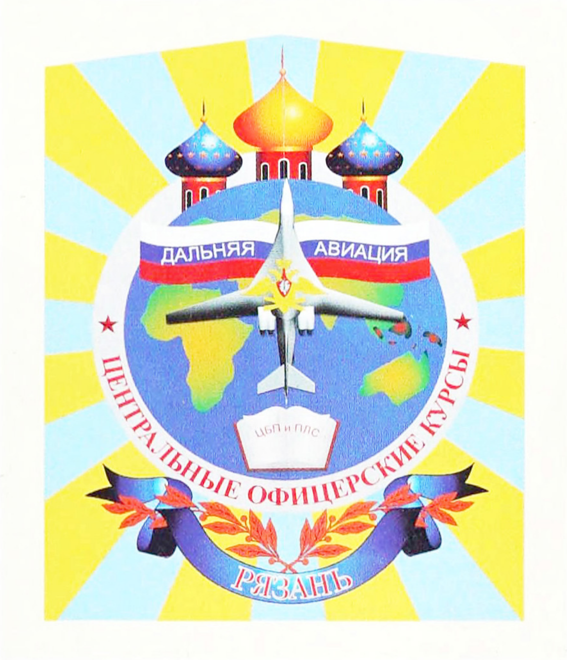
181st OAE An-12BP '17 Yellow' (c/n 7344905)



An-12BP '35 Red', Ookraïnka AB

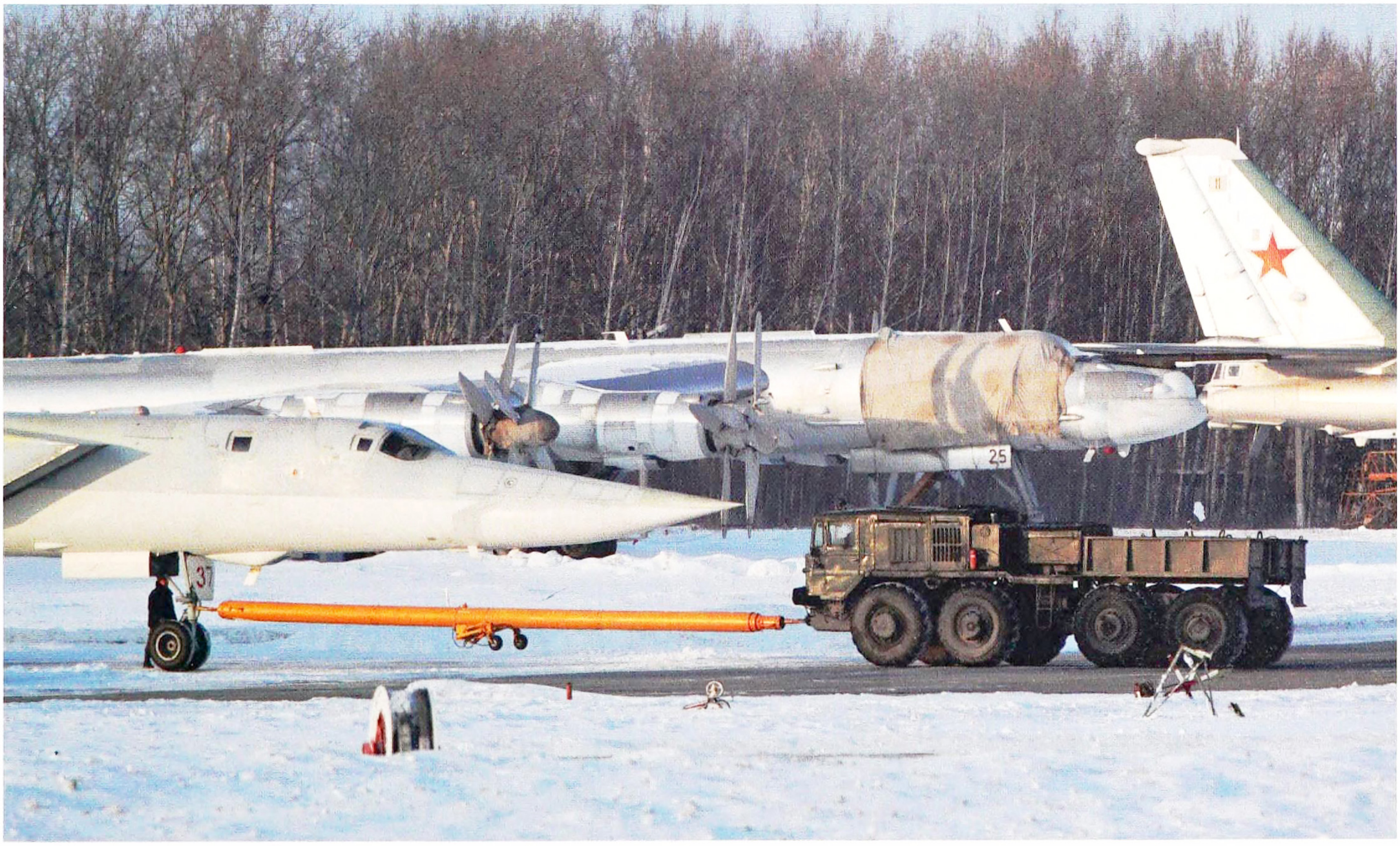
new Instructional Heavy Bomber Regiment (ITBAP – *in**strook**torskiy tya**zhol**yy bombardi**rov**ochnyy **a**via**polk***) was established and included in the Centre's structure to replace the 251st ITBAP, which remained in the Ukraine. Additionally, the training air regiments from Tambov and Orsk were transferred under the Centre's control while remaining stationed at their existing bases; these two regiments operated Tu-134UBL trainers specially designed for training DA pilots. In 1993 the instructional regiment had 16 long-range missile carriers on strength – eight Tu-95K-22 *Bear-Gs* and eight Tu-95K *Bear-Bs*, plus seven Tu-95U trainers stripped of armament. Two years later the regiment's aircraft complement had completely changed (ten Tu-22M3s and ten Tu-95MSs) to reflect the two basic types of the Russian Long-Range Aviation.

The instructional regiment was disbanded in 1997, its place being taken over by the 203rd GvOAPSZ transferred from Engels, but the aerial refuelling regiment was not included into the structure of the 43rd TsBP i PLS. Two squadrons of the Centre remained in Ryazan', one operating Tu-22M3s and Tu-134UBLs, the other being equipped with Tu-95MSs and An-26s. In 1998 the training regiments at Orsk and Tambov were disbanded.



A pennant of the Long-Range Aviation's Central Officers' Training Courses (43rd Combat Training & Aircrew Conversion Centre), Ryazan'.

Besides preparation of flight and ground crews, the specialists of the Centre perform a great deal of research work. In total from the moment of its establishment the research department has performed more than 600 research and operative tasks, developing combat training techniques and methodical aids on flight operations, carrying out training programmes, analysing the results of combat use of strike aviation systems. Recent programmes have included tests of the upgraded Tu-134UBL-3 (Tu-134UBLSh) pilot/navigator trainer, evaluation and tests of satellite naviga-



Tu-22M3 '37 Red' is pushed back by a MAZ-535 prime mover past Tu-95MSs '25 Red' and '11 Red' at the 43rd Centre, Dyagilevo AB.

Bear-H '24 Red' shares the flight line at Dyagilevo with *Backfire-Cs*.

tion equipment for the purposes of navigation and weapons application.

Currently the 43rd Centre is responsible for training flight and ground crews of the DA. Air Force Academy graduates freshly dispatched to the Long-Range Aviation receive their 3rd Class ratings at Dyagilevo. The future co-pilots of Tu-22M3s gain additional flight time on Tu-134UBL jet trainers, and Tu-95MS co-pilots do so on An-26 turboprops. The Centre also helps pilot careers; co-pilots of first-line regiments upgrade to aircraft captains here, while aircraft captains upgrade to squadron commanders. The 43rd TsBP i PLS provides a complete training cycle for Tu-22M3 and Tu-95MS crews, while future members of Tu-160 and IL-78 crews take theoretical training at the Centre.

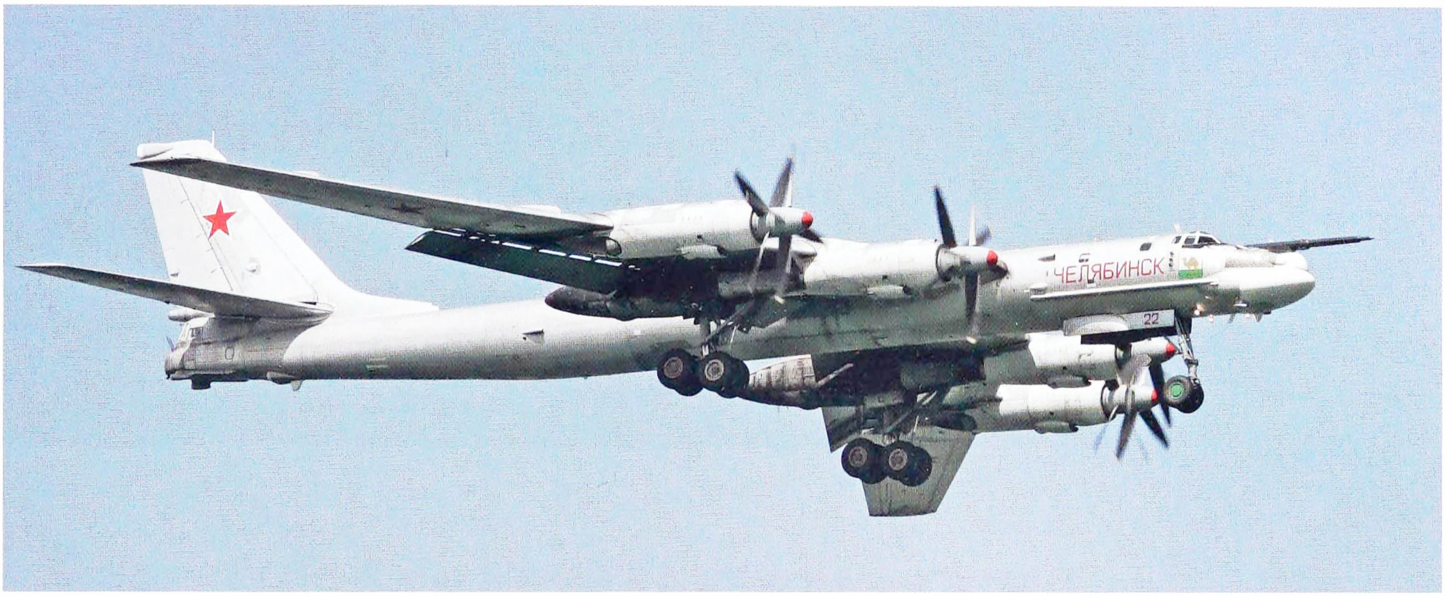
The 43rd TsBP i PLS has been repeatedly visited by foreign delegations and journalists. Thus, in the Autumn of 1993 a flight in a visiting 182nd TBAP Tu-95MS was organised for Aviation Week & Space Technology editor Craig Covalt, who had earlier repeatedly flown the *Bear-H*'s US counterpart, the B-52H. In his magazine feature the American journalist highly appreciated the Tu-95MS, making special note of the comfortable flight deck. In August 2001 the Centre was visited by a US Air Force/Strategic Aviation Command delegation headed by Lt.-Gen. Thomas J. Keck.

Some of the Centre's aircraft have been given proper names. For example, Tu-95MS '20 Red' was named *Ryazan'* on 20th December 1999 to celebrate the 85th anniversary of the Long-Range Aviation. Another *Bear-H* coded '23 Red' was named *Tambov* on 12th August 2000, and Tu-95MS '22 Red' was named *Chelyabinsk* on 29th September 2001 to celebrate the 65th anniversary of the Chelyabinsk Military Navigator College which trains navigators for the Long-Range Aviation.

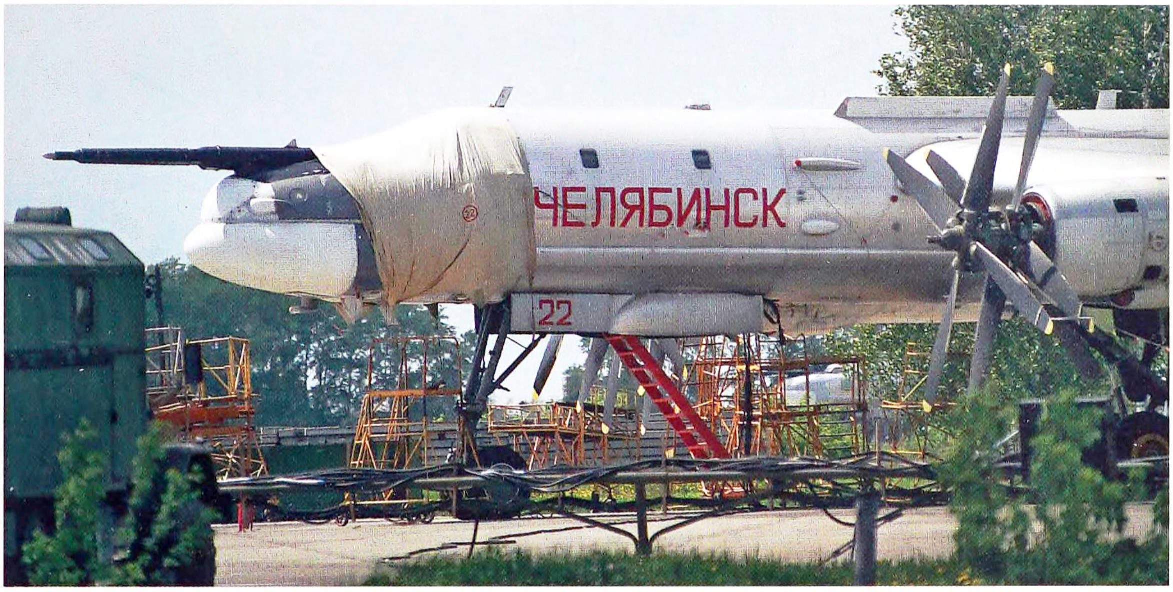
Over the years the 43rd TsBP i PLS was commanded by the following people:

The badge of the 43rd TsBP i PLS.

Judging by the style of the tactical code, Tu-95MS '62 Red' is a former 79th TBAP machine.

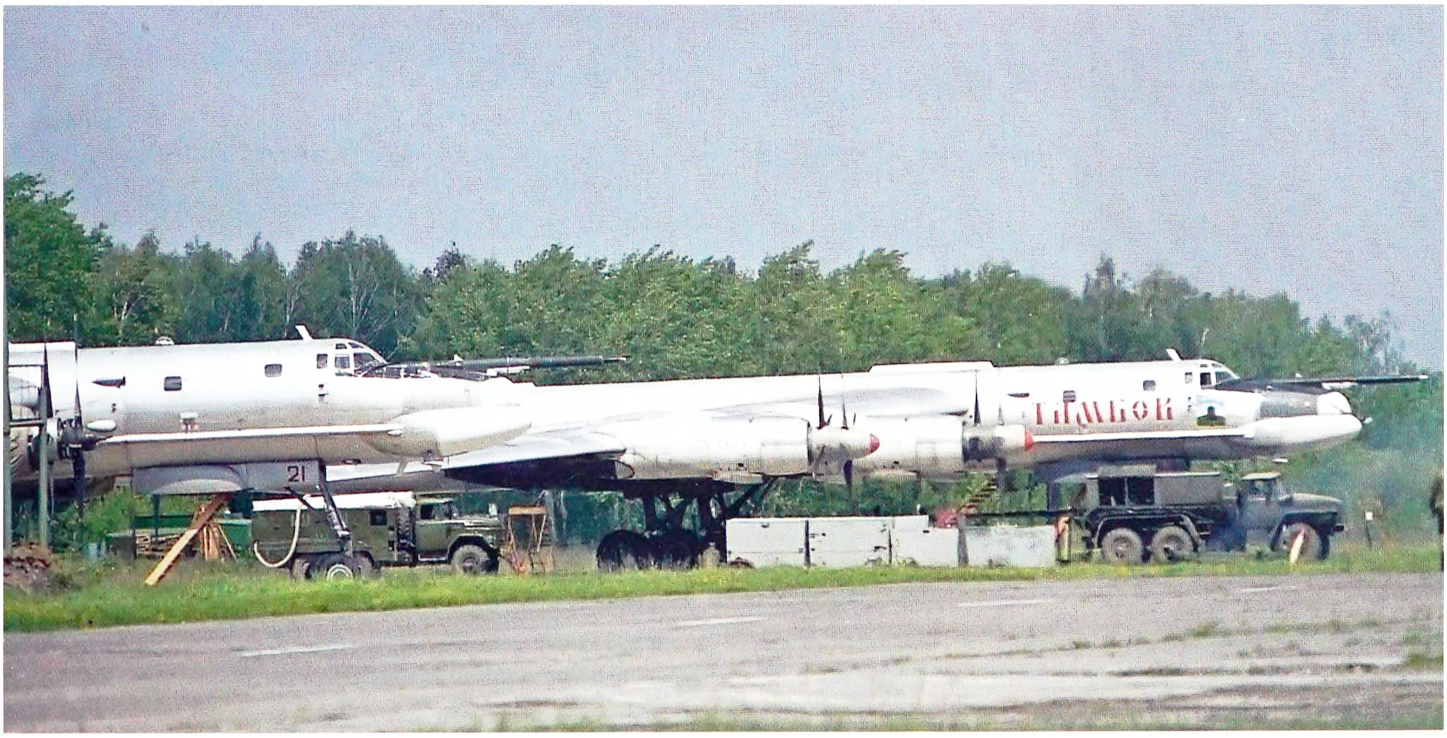

ЧЕЛЯБИНСК
22

'22 Red' *Chelyabinsk*, a Tu-95MS of the 43rd TsBP i PLS, comes in to land.

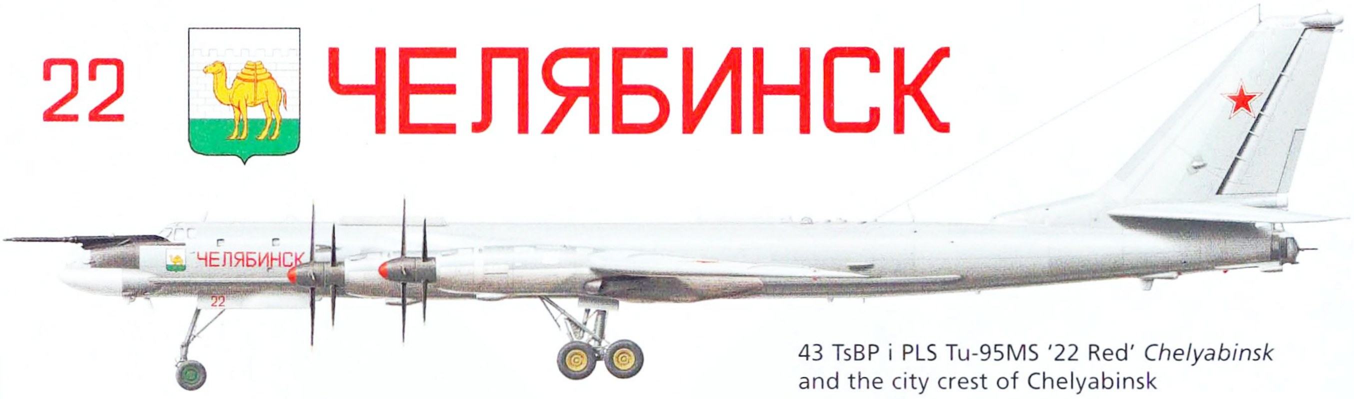

ЧЕЛЯБИНСК
22

The same aircraft in slightly 'unbuttoned' condition.

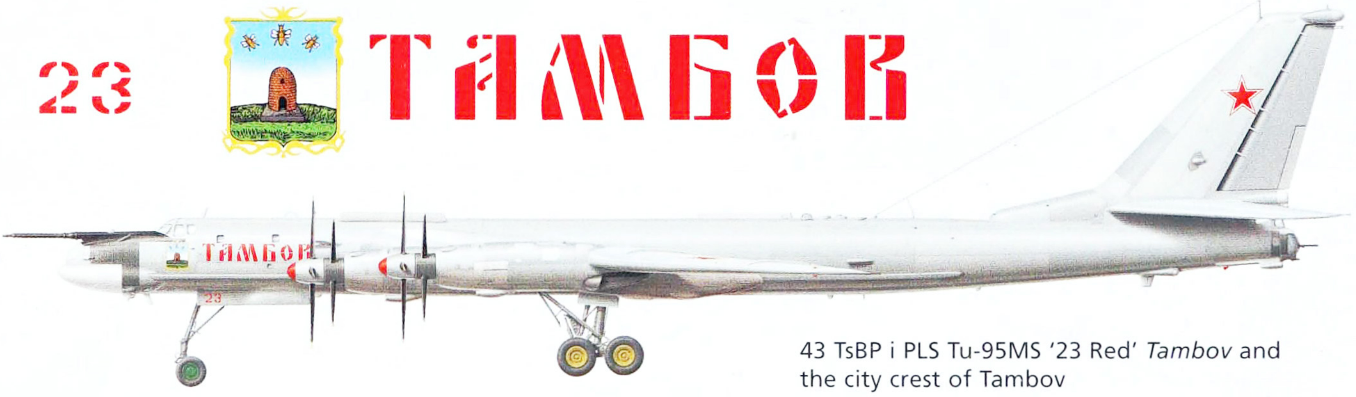
A 43rd Centre Tu-95MS ('23 Red' *Tambov*) is prepared for flight.



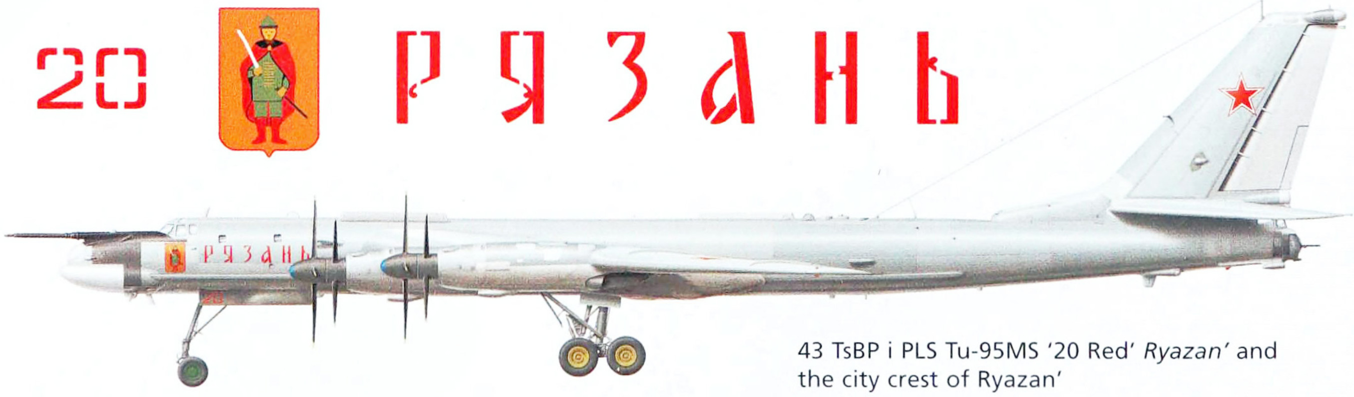
A visiting 184th TBAP Tu-95MS, '11 Red' *Vorkuta*, taxies out for a night sortie.


22
ЧЕЛЯБИНСК
ЧЕЛЯБИНСК
22

43 TsBP i PLS Tu-95MS '22 Red' *Chelyabinsk* and the city crest of Chelyabinsk

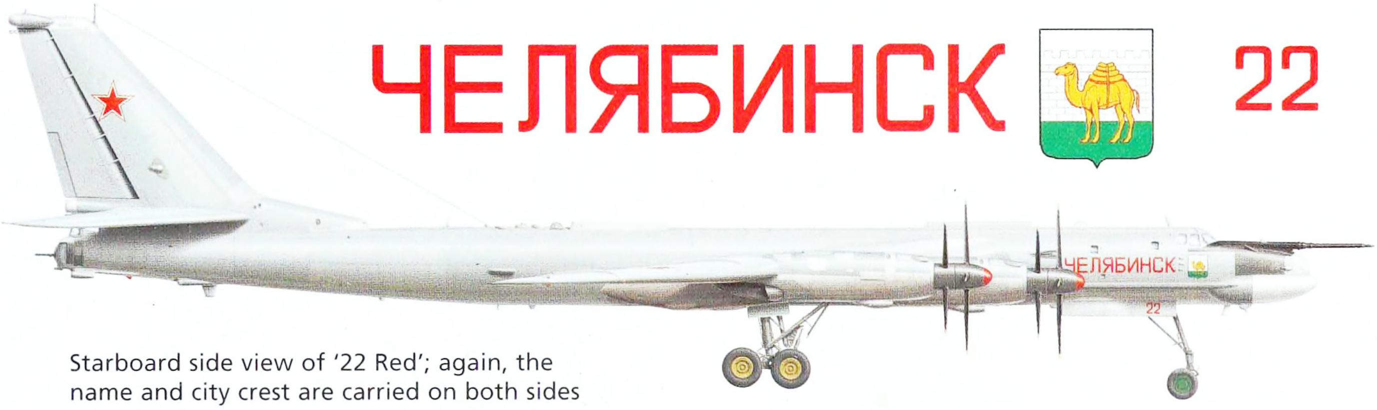

23
ТАМБОВ
ТАМБОВ
23

43 TsBP i PLS Tu-95MS '23 Red' *Tambov* and the city crest of Tambov

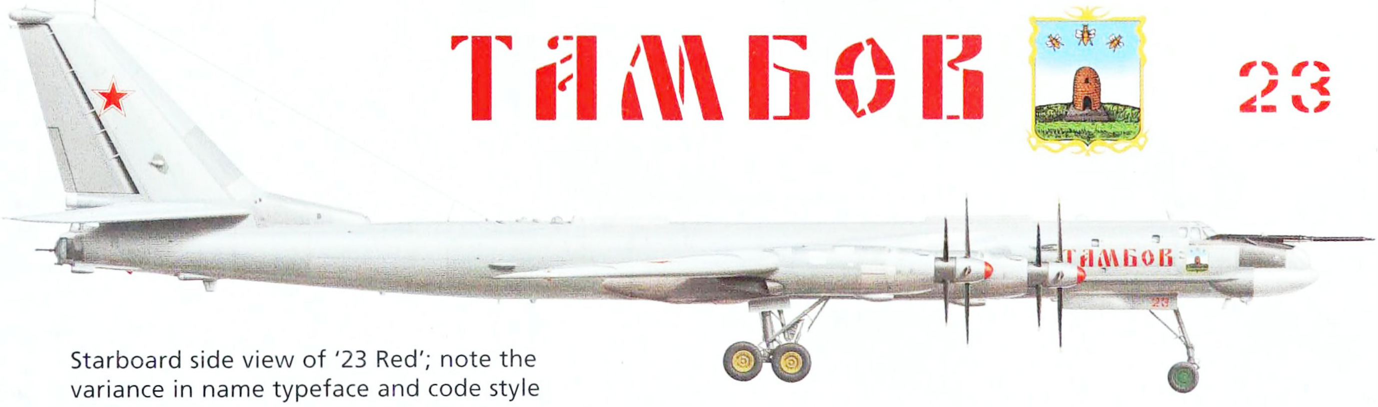

20
РЯЗАНЬ
РЯЗАНЬ
20

43 TsBP i PLS Tu-95MS '20 Red' *Ryazan'* and the city crest of Ryazan'

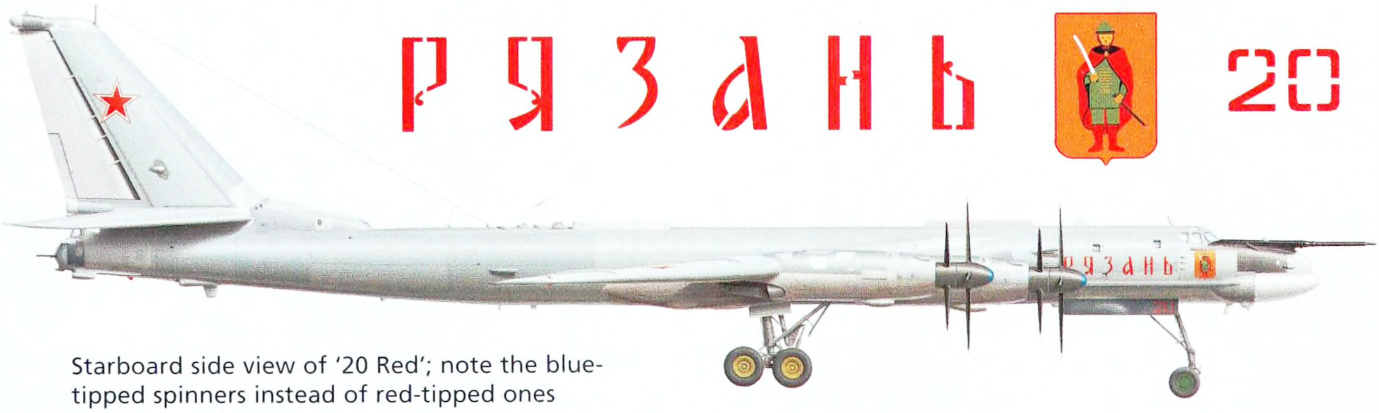
A dramatic nigh shot of a *Bear-H* at Ryazan'.



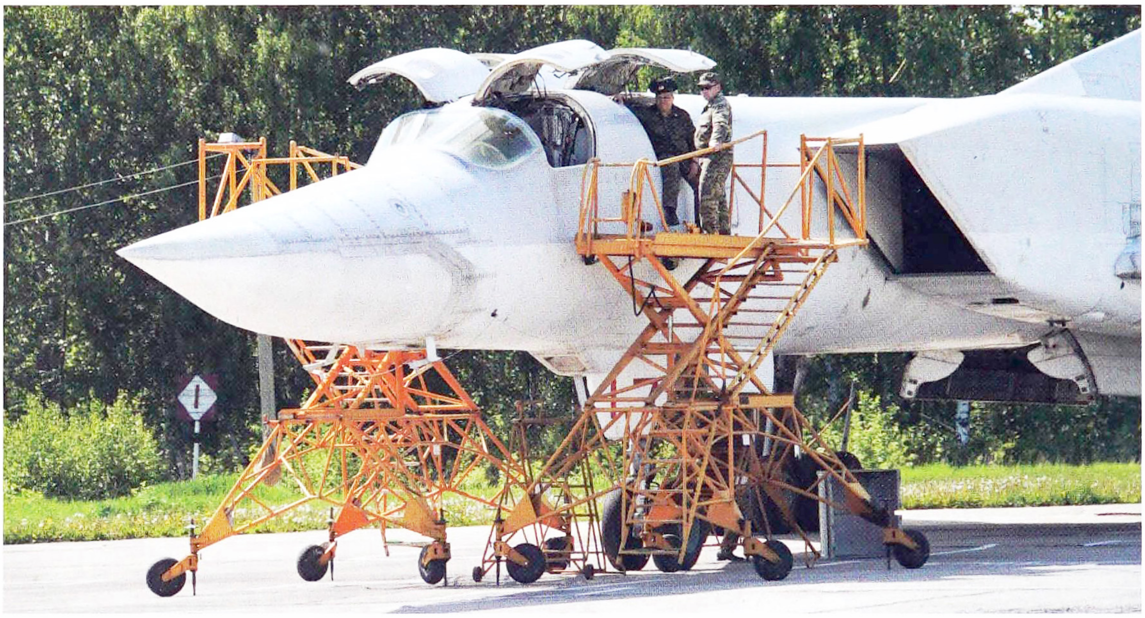
Starboard side view of '22 Red'; again, the name and city crest are carried on both sides



Starboard side view of '23 Red'; note the variance in name typeface and code style



Starboard side view of '20 Red'; note the blue-tipped spinners instead of red-tipped ones

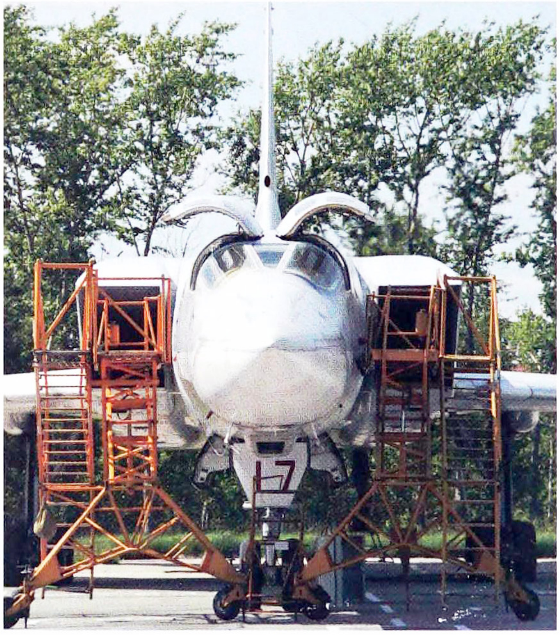


'17 Red', one of the 43rd Centre's Tu-22M3s, being worked on.

Colonel V. T. Dovalgo (from 1989);
Colonel I. S. Krasil'nikov (from 1997);
Major-General A. Konovalov.

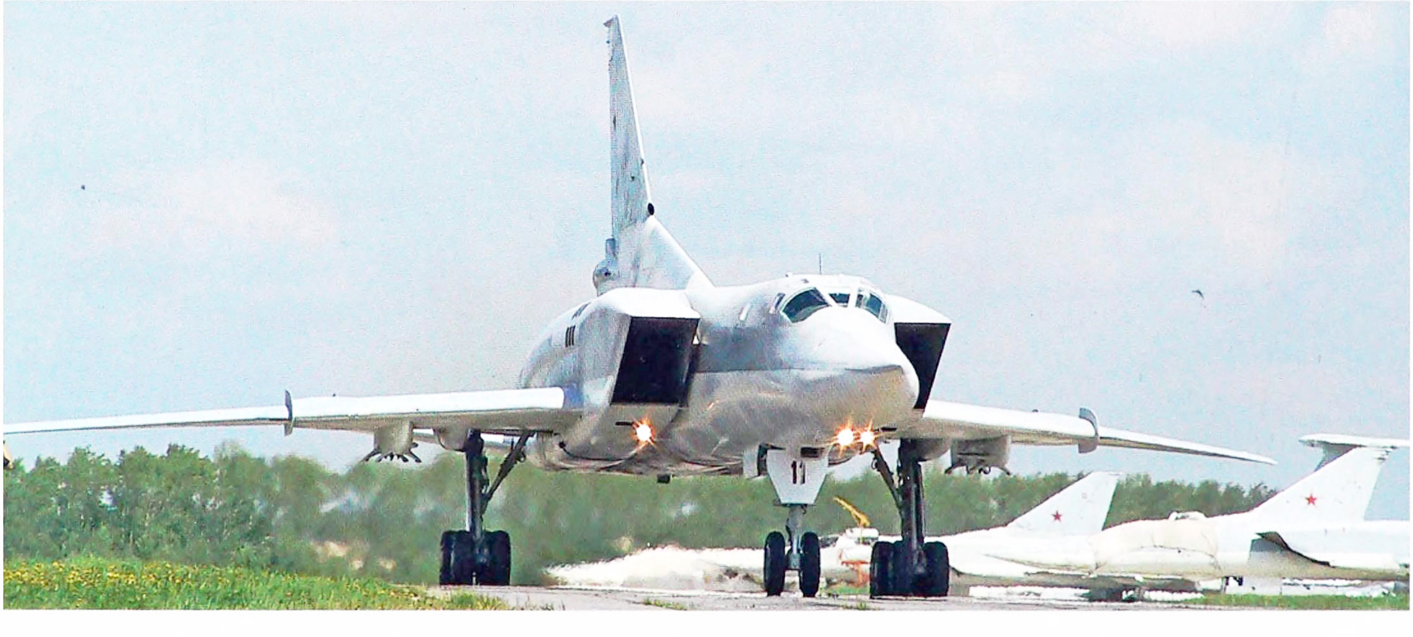
1449th Air Base, Tambov

The history of the Tambov air base originates from the military pilot school established in 1931 at Engels airfield near Saratov. Training of cadets was conducted on Polikarpov U-2, R-1 (de Havilland DH.9A copy) and Polikarpov R-5 biplanes. The school was considered one of the best in the country, ranking number 1 among the Red Army Air Force's aviation schools in 1936 as regards combat training. In 1954 the school moved from Engels to Tambov, being transformed into a military pilot college (TVVAUL – *Tam**bov**skoye **vys**sheye aviatsi**on**noye oo**chil**ishche **lyot**chikov*). From 1982 the training of cadets was con-



Front view of the same aircraft with the *Backfire*'s distinctive crew boarding platforms on both sides.

Opposite, top: Wheels caught in mid-retraction, Tu-22M3 '15 Red' takes off from Dyagilevo.

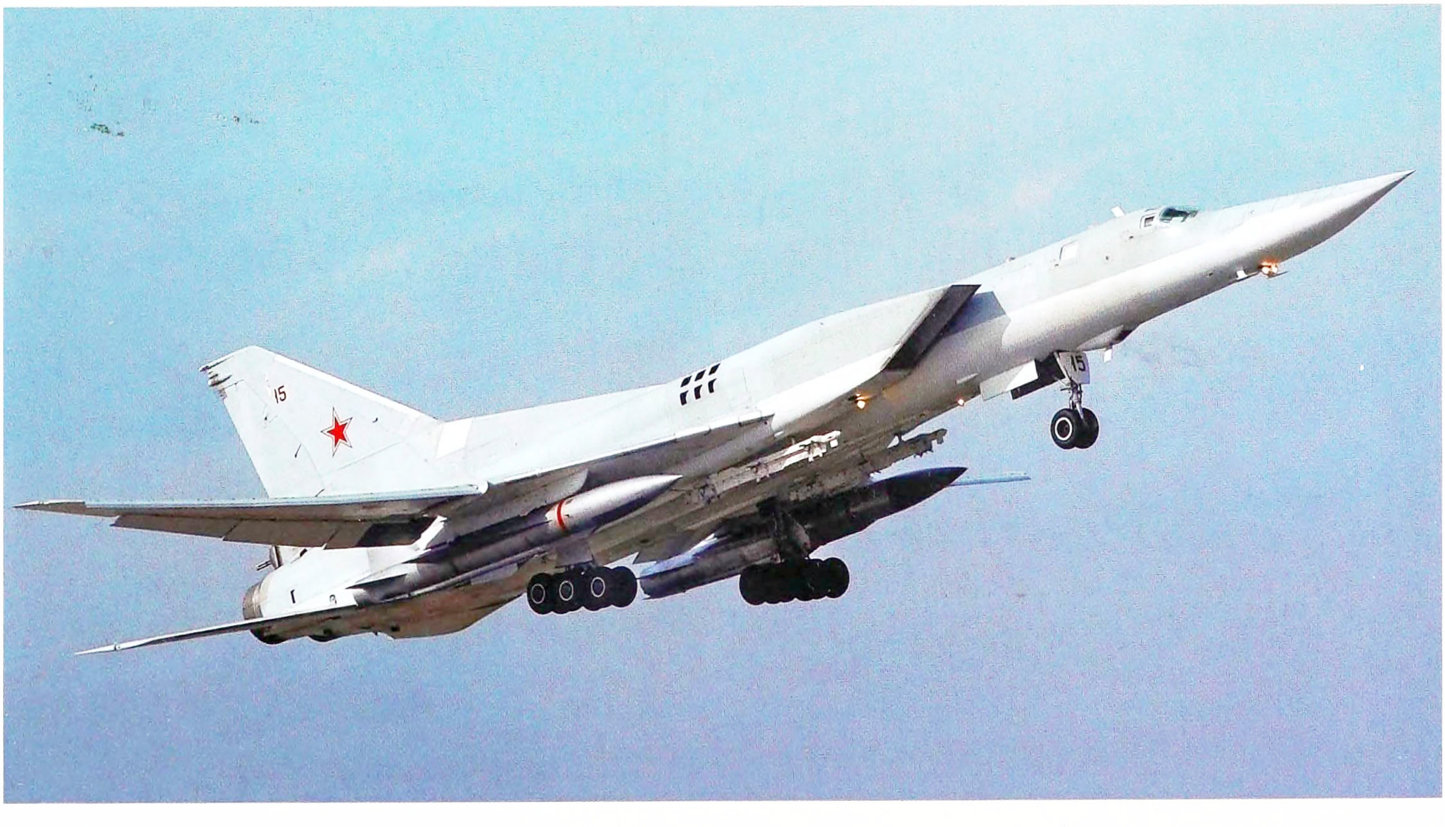


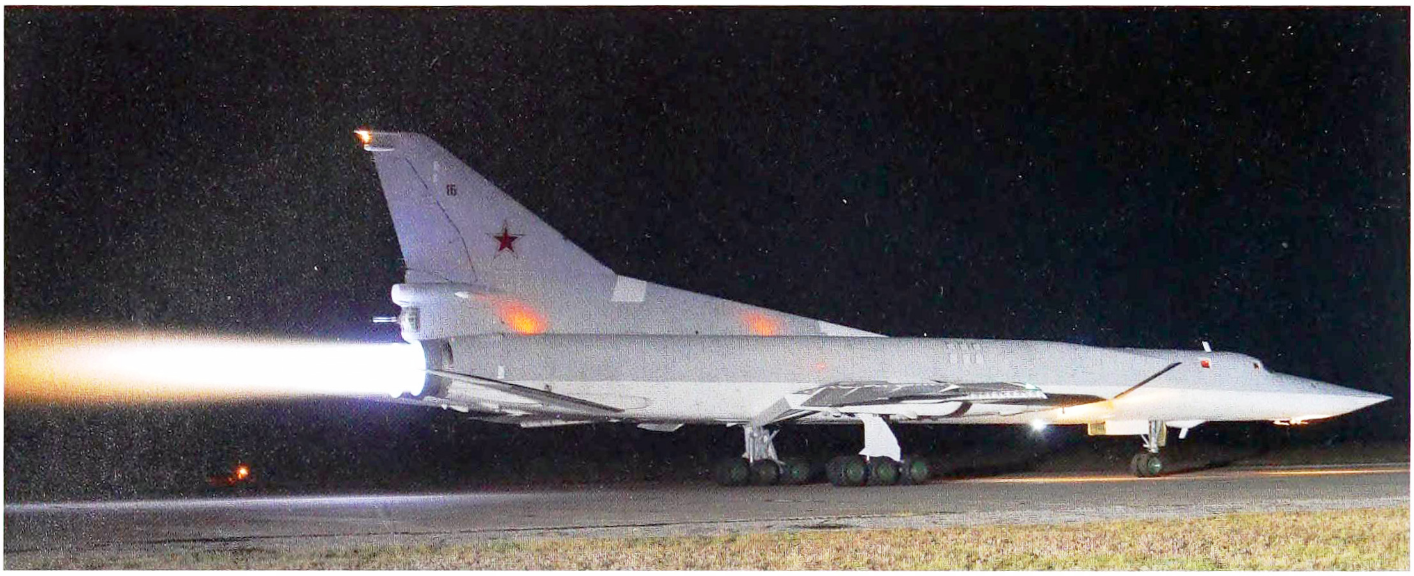
Tu-22M3 '11 Red' taxies out for take-off at Dyagilevo AB.

ducted on Tu-134UBL trainers. The last graduation was in 1995.

In November 1952 the 3rd Air Regiment named after Hero of the Soviet Union Marina Raskova (a record-breaking aviatrix of the 1930s) had been established in Engels. This unit was later renamed into the 652nd UAP (*oo**cheb**nyy* ***avia**polk* – Training Air Regiment). From 1958 the 652nd UAP was based in Tambov, providing flight training of

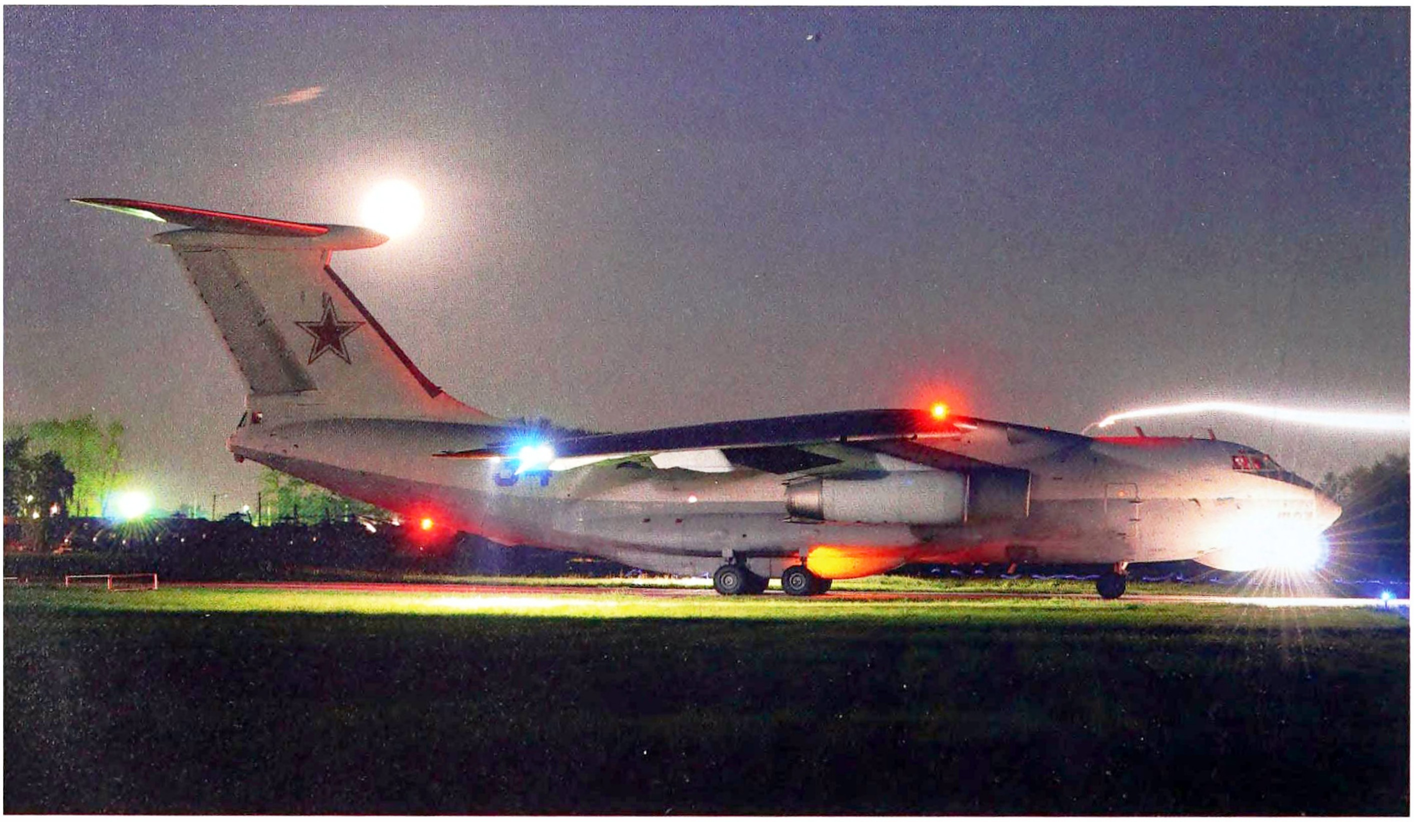
Below: The same Tu-22M3 '15 Red' carrying inert Kh-22N/Kh-22NA missiles and MERs.





'16 Red', a 43rd Centre Tu-22M3, belches afterburner flames during a night take-off. The orange flashes on the fuselage are formation lights.

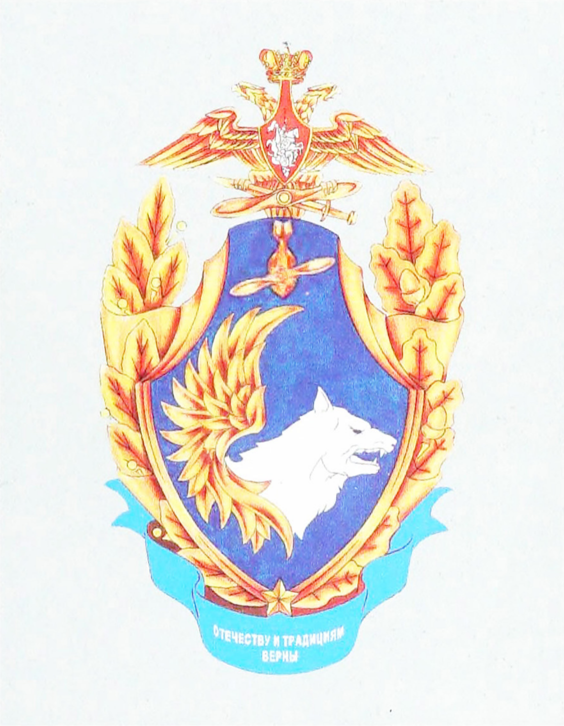
IL-78 '34 Blue' about to take off on a night sortie. The wing HDUs are not installed.



TVVAUL cadets. At various times the regiment was equipped with Ilyushin IL-28U *Mascot* bomber trainers, Aero L-29 Delfin basic jet trainers, Aero L-39C Albatros basic jet trainers, Tu-134Sh-1 navigator trainers and Tu-134UBL pilot trainers. After the disintegration of the USSR, in December 1992 the regiment came under the control of the 43rd TsBP i PLS in Ryazan'. Between 1952 and 1998 the regiment has trained more than 7,000 pilots.

After the disbandment of the 652nd UAP only an aviation commandant's office remained at Tambov. That said, the prospect of the Russian Long-Range Aviation losing its training aircraft fleet loomed large. However, on 1st September 2000 the 388th Training Air Squadron was formed in Tambov. Since 1st July 2002 this squadron and two maintenance units (an independent aircraft maintenance company and an independent communications & radio technical support company) have been organised into the 1449th Air Base. The base structure also includes the 367th OSAE (*ot**del’**naya* ***smesh**annaya* ***a**viaeskad**ril’**ya* – Independent Composite Air Squadron), which had been disbanded in Stupino, Moscow Region. Not only the aircraft but also the Combat Banner of 2nd Independent Airlift Squadron decorated with the Red Star Order have been transferred to Tambov.

Now the 1449th Air Base has three types of aircraft – the An-26, Tu-134UBL and IL-18. The base commander is Col. S. I. Yepifanov.

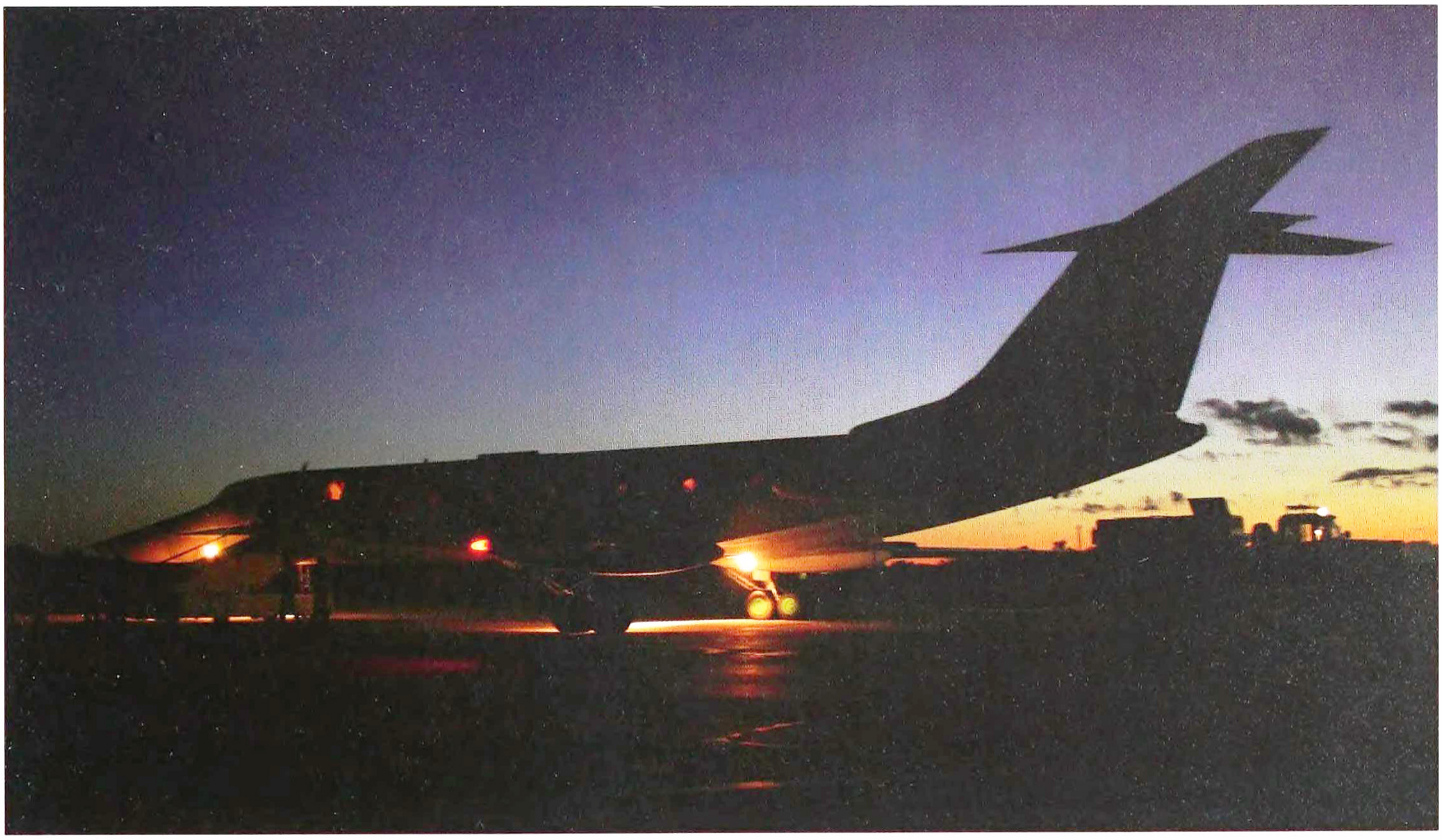


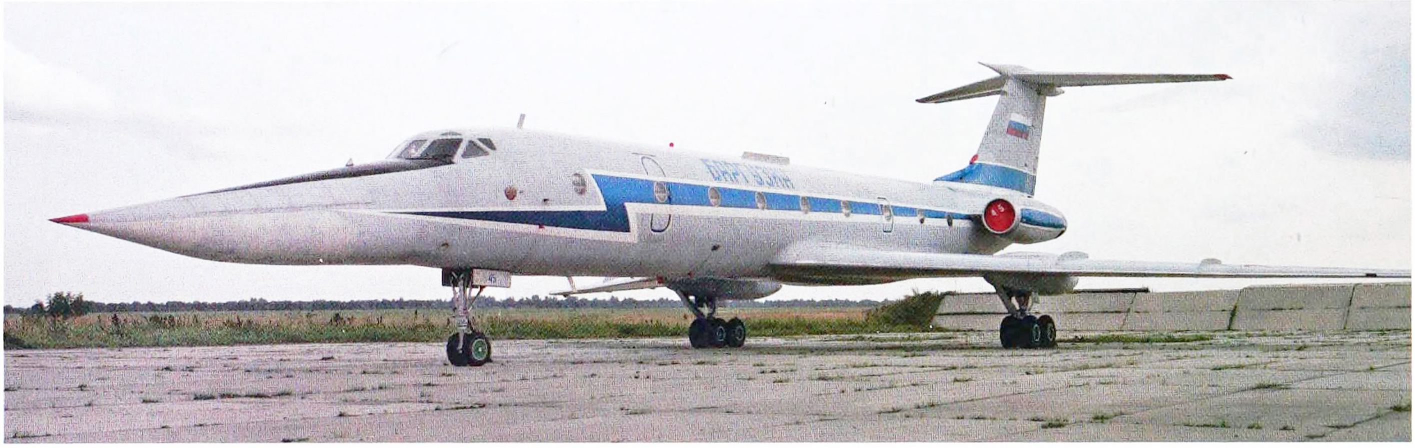
The crest of the Tambov base. The motto reads *Otechestvu i traditsiyam verny* (We are loyal to Fatherland and to traditions).

199th Main Composite Air/Military Base (Tiksi-3 AB)

The 199th Main Composite Military/Air Base was established in keeping with a Soviet MoD General Staff directive dated 30th December 1954. The 24th OSAE was formed in Ulan-Ude

An atmospheric late night shot of a Tu-134UBL trainer.

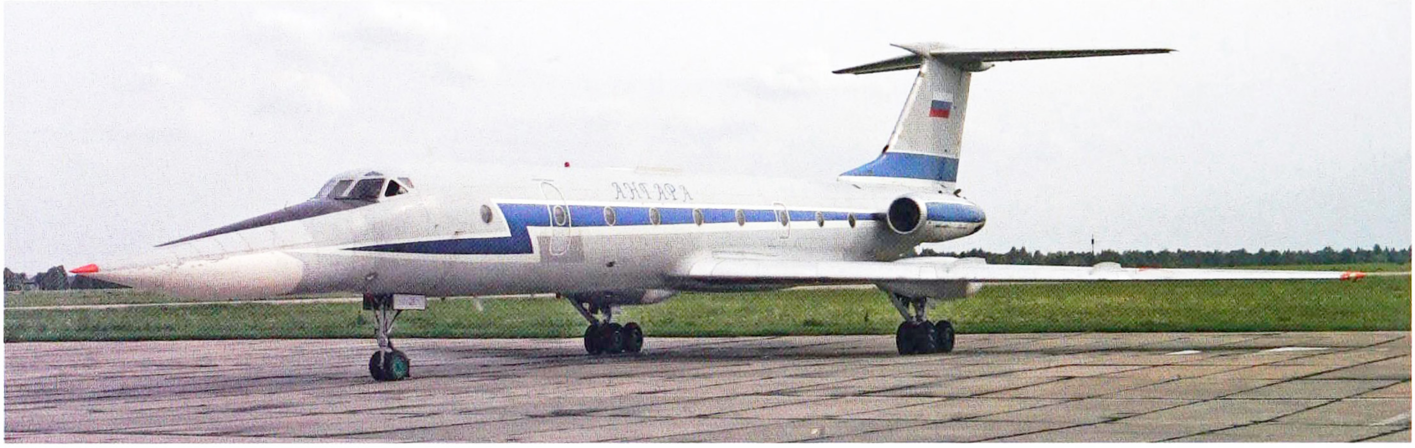




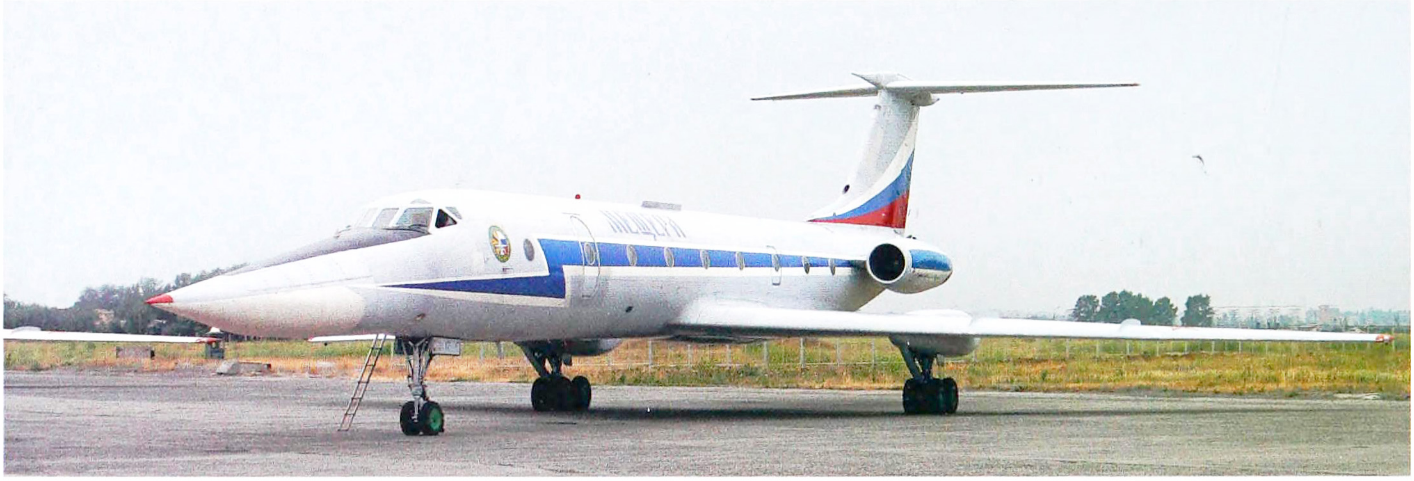
The DA's active Tu-134UBLs sport blue lightning bolts and usually have individual names. This is '45 Blue' *Barguzin*.

on the basis of an independent transport/paradrop regiment of the 45th Air Army in 1954-55, whereupon it was redeployed to the Soviet Polar region. The squadron was equipped with Lisunov Li-2 and Ilyushin IL-12 transport aircraft and Antonov An-2 utility biplanes. In March 1956 the 24th OSAE was renamed into 24th Independent Airlift Squadron (OTAE – *ot**del’**naya **trahns**portnaya **a**viaeskad**ril’**ya*) and re-equipped with IL-14s and Li-2s. In July 1959 the unit started taking delivery of An-12 transports and, shortly afterwards, Mil' Mi-8 helicopters.

In 1990-91 the squadron participated in a search and rescue exercise held at the North Pole. During the exercise parachutists were dropped squarely on the Pole. Fuel drums for refuelling the helicopters involved had been paradropped in advance along the planned route by An-12s; new parachute delivery systems were tested in so doing. In April 1993 the joint Russian-Canadian-US exercise SAREX-93 (Search and Rescue Exercise) took place in the conditions of the Arctic. In September 1993 the squadron's personnel was involved in locating and evacuating an expedition in distress



Tu-134UBL '21 Blue' *Angara* (above) has the same pattern. In contrast, '17 Blue' *Meshchera* has altogether different tail colours.



Tu-134UBL '14 Blue' *Desyatina* again has the 'small flag/blue stripe' tail colours.

near the Novosibirsk Islands in the Arctic Ocean. In February 1994 the squadron again participated in a Russian-Canadian-US exercise (Arctic SAREX-94) held in Alaska. On 15th September 2004 the crews of two Mi-8 helicopters captained by Maj. Beregovoy and Capt. Dorofeyev rescued 30 persons from a fishing vessel icebound 200 km (124 miles) from Tiksi.

The 24th OSAE was still based at Tiksi-3 in 2009. An-12 and An-26 transports, as well as Mi-8 helicopters, are assigned to the base.

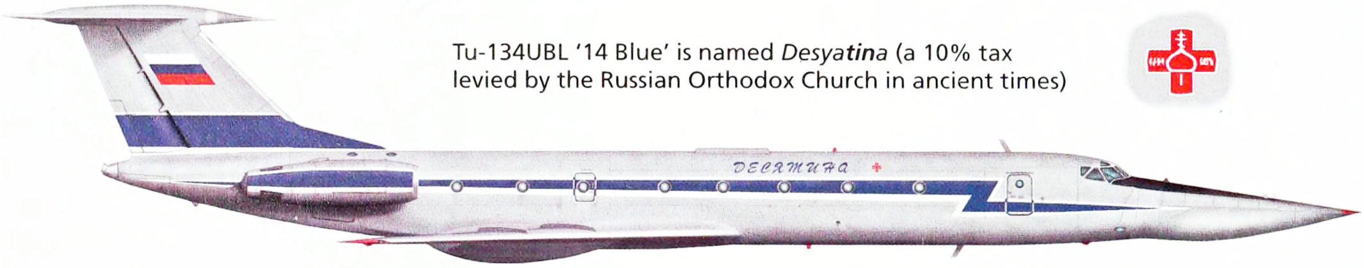
Over the years the base was commanded by the following people:

Col. Ya. S. Kharchenko (from 1989);
Col. A. M. Kseidinov (from 1995);
Col. V. G. Shuypis (from 1997);
Col. V. A. Koshevarov (from 1998);
Lt.-Col. I. V. Kudryashov (from 2000).

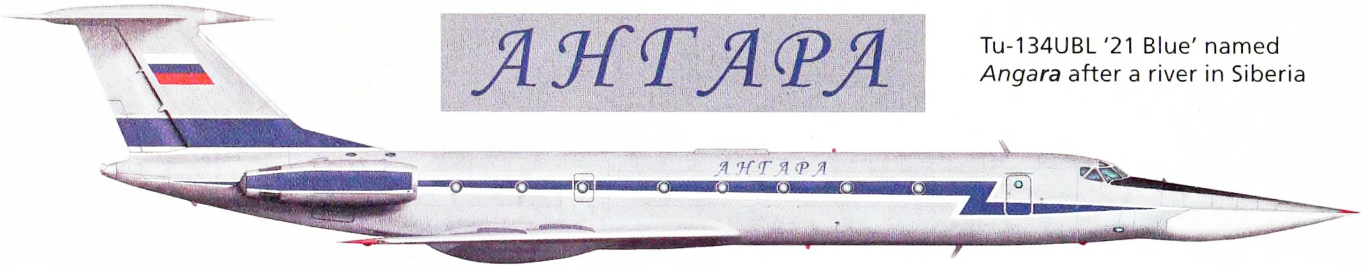
361st Aviation Commandant's Office, Anadyr'

In keeping with a Soviet MoD General Staff directive dated 17th March 1959 and a Long-Range Aviation HQ instruction issued on the same day the 445th Air Base was formed

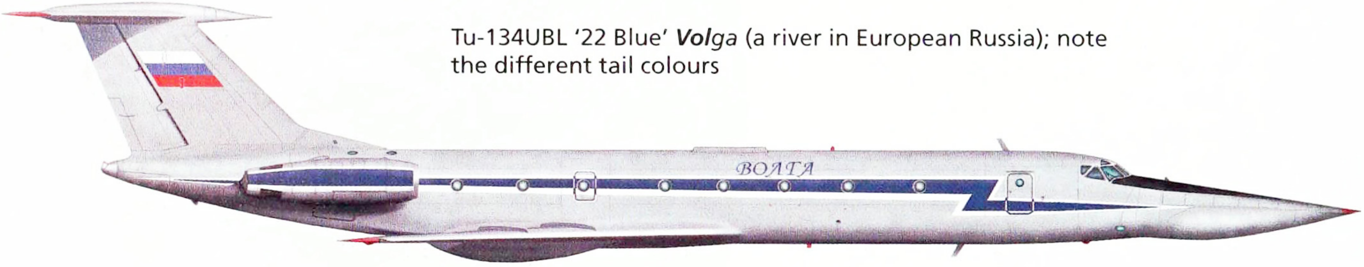
Four Tu-134UBLs, including as-yet nameless '24 Blue' with Russian flag tail colours.



Tu-134UBL '14 Blue' is named *Desyatina* (a 10% tax levied by the Russian Orthodox Church in ancient times)

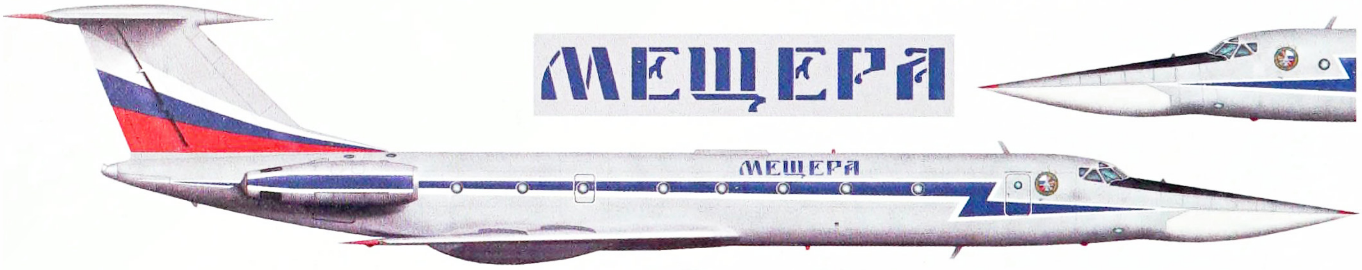

АНГАРА
АНГАРА

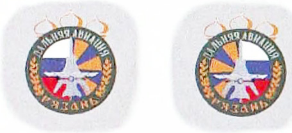
Tu-134UBL '21 Blue' named *Angara* after a river in Siberia



Tu-134UBL '22 Blue' *Volga* (a river in European Russia); note the different tail colours

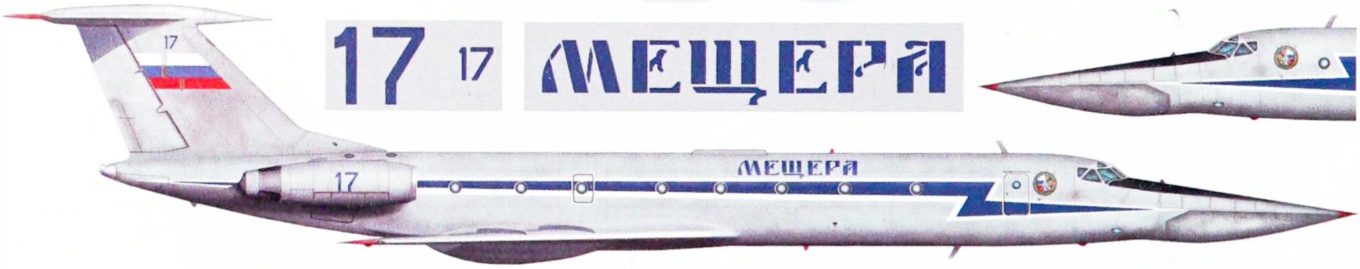
Tu-134UBL '17 Blue' *Meshchera* (a Russian town) in late colours


МЕЩЕРА
МЕЩЕРА



starboard side

port side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17
МЕЩЕРА
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17
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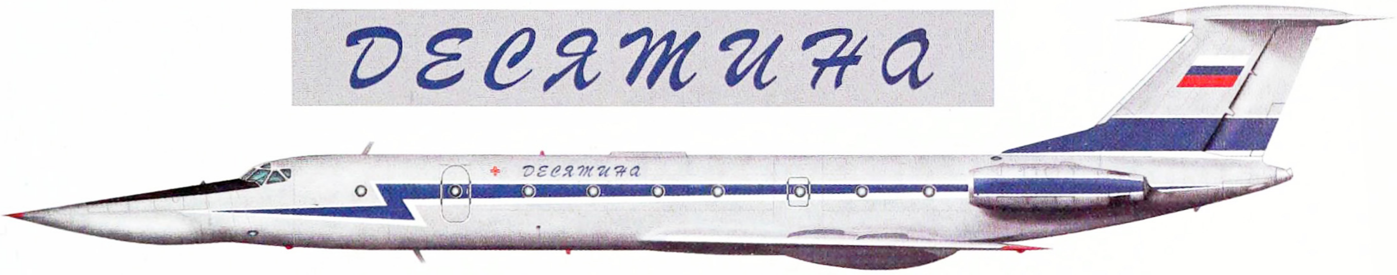
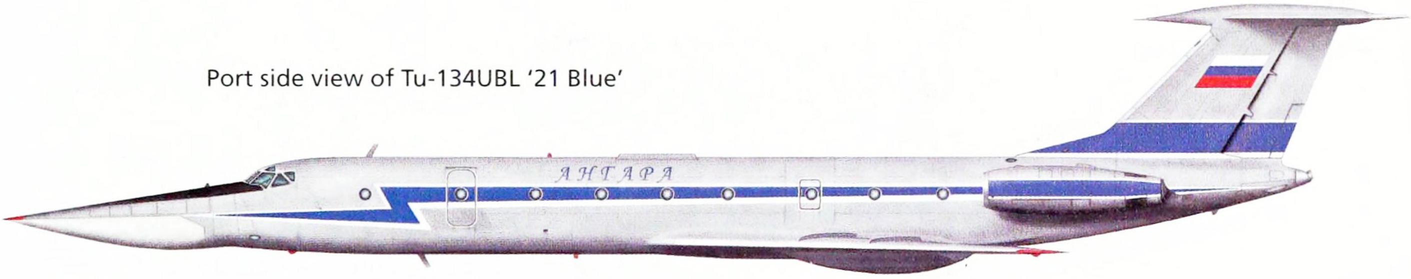
The same aircraft in an earlier colour scheme

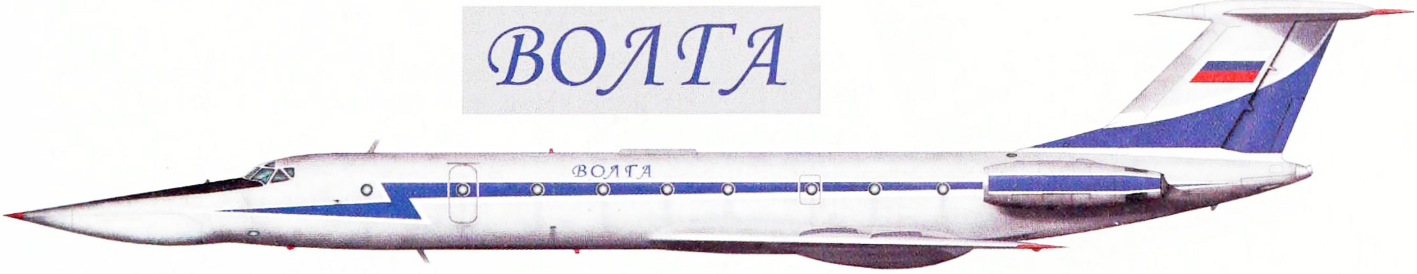

ДЕСЯТИНА
ДЕСЯТИНА

Port side view of Tu-134UBL '14 Blue'

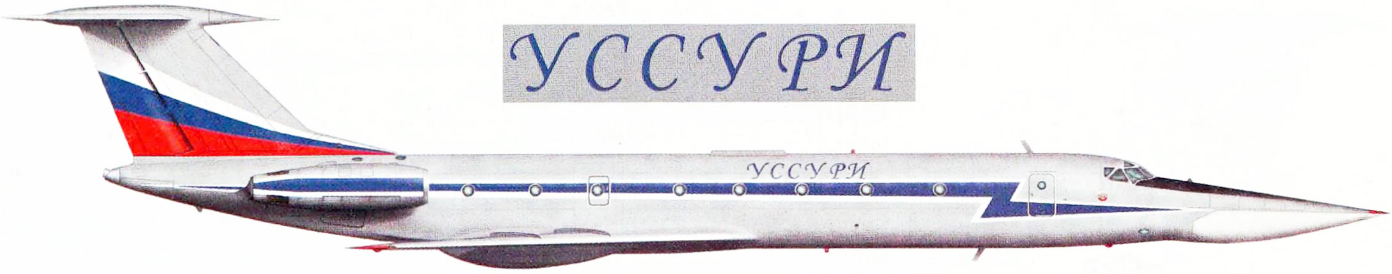
Port side view of Tu-134UBL '21 Blue'

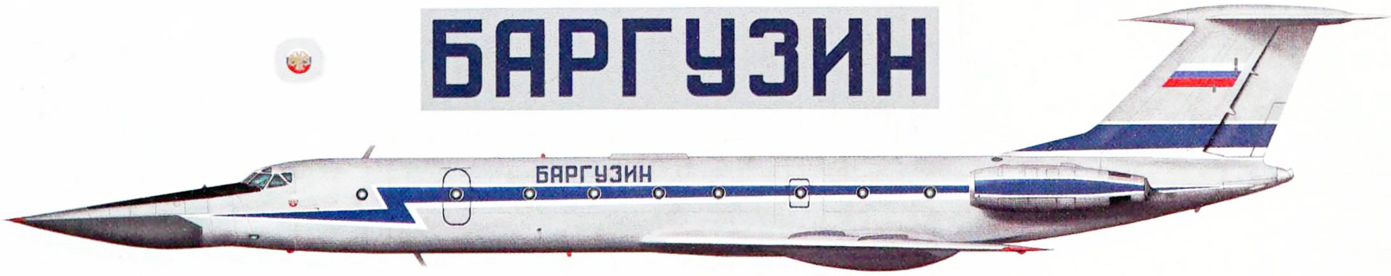


Port side view of Tu-134UBL '22 Blue' with new tail colours

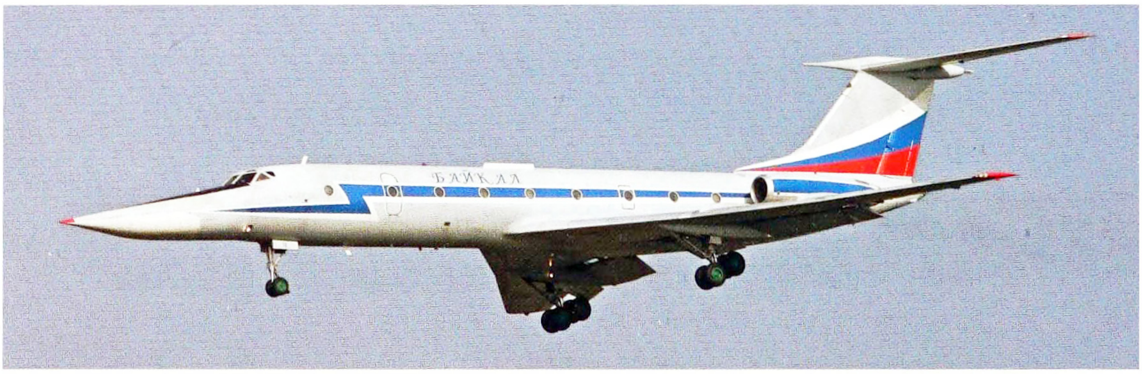

ВОЛГА
ВОЛГА

This Tu-134UBL is named *Ussuri* after a river in the Russian Far East

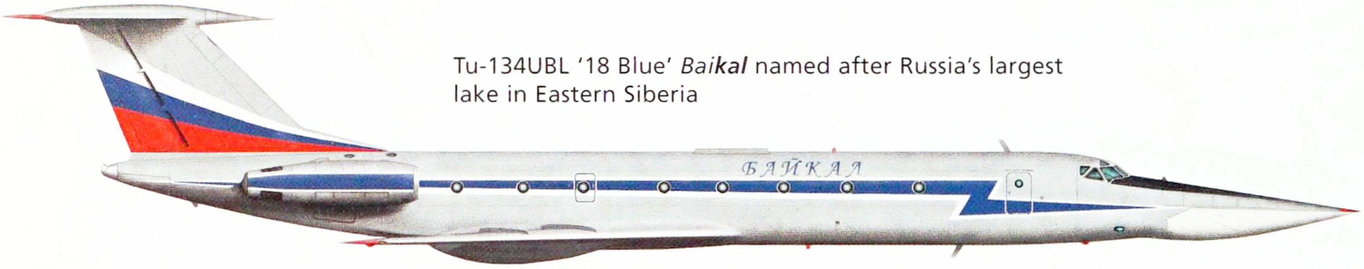

УССУРИ
УССУРИ


БАРГУЗИН
БАРГУЗИН

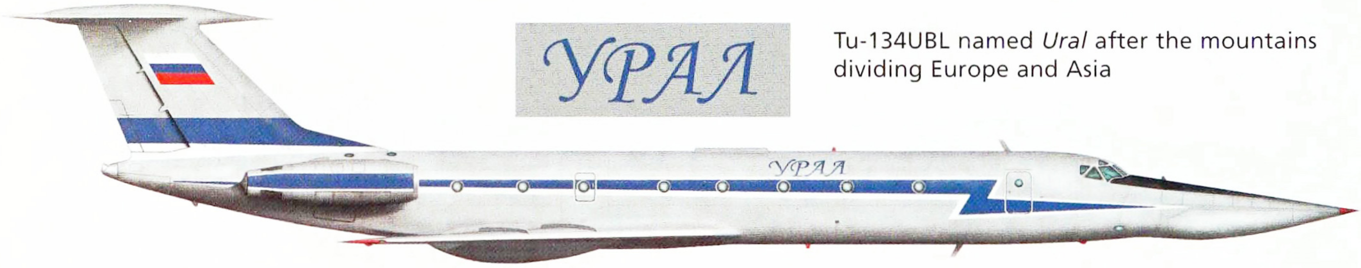
Tu-134UBL '45 Blue' *Barguzin* (a Russian river emptying into Lake Baikal)



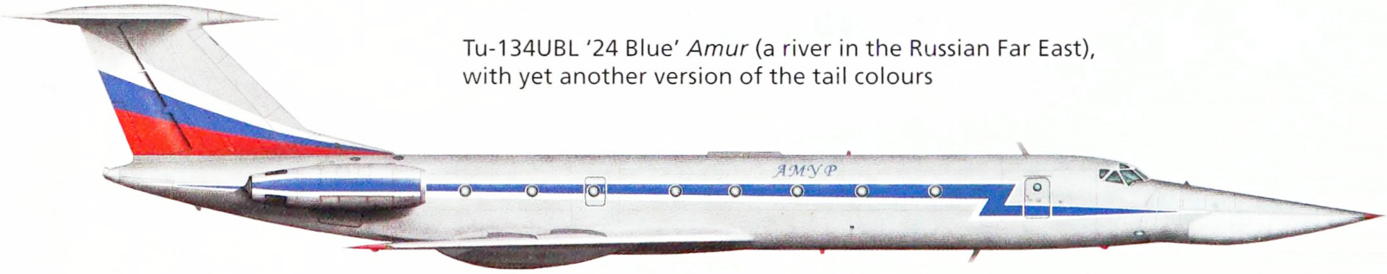
Seen here on final approach, Tu-134UBL '18 Blue' *Baikal* has the Russian flag version of the tail colours.



Tu-134UBL '18 Blue' ***Baikal*** named after Russia's largest lake in Eastern Siberia

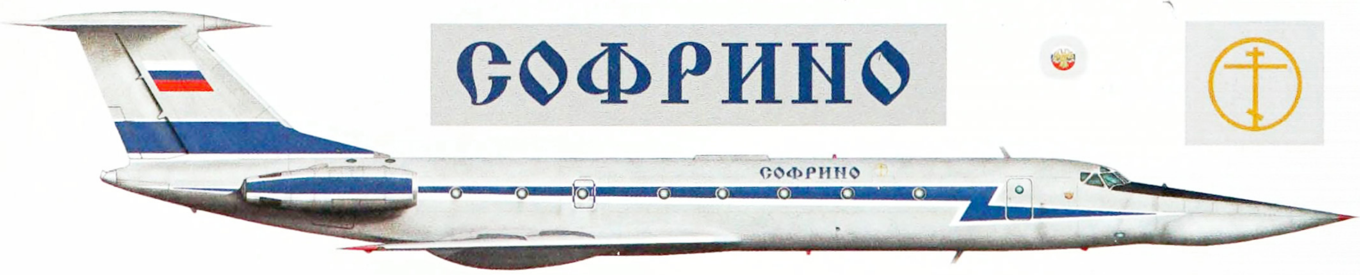


Tu-134UBL named *Ural* after the mountains dividing Europe and Asia



Tu-134UBL '24 Blue' *Amur* (a river in the Russian Far East), with yet another version of the tail colours

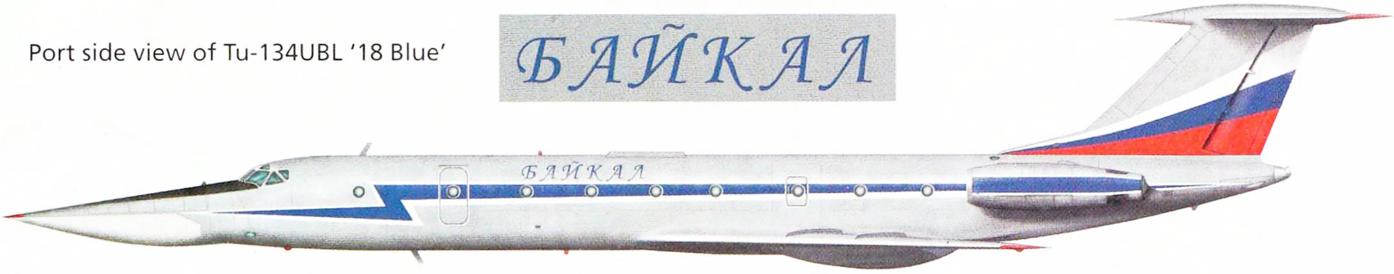
Tu-134UBL '23 Blue' Sofrino (a Russian town with rich Russian Orthodox Church traditions)

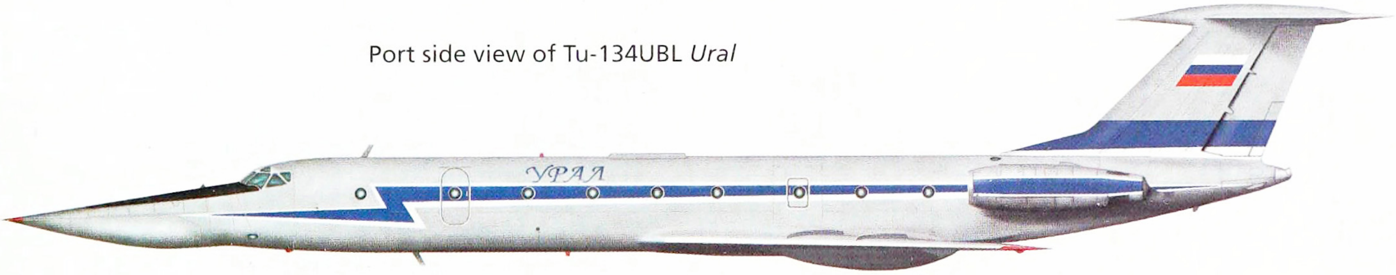


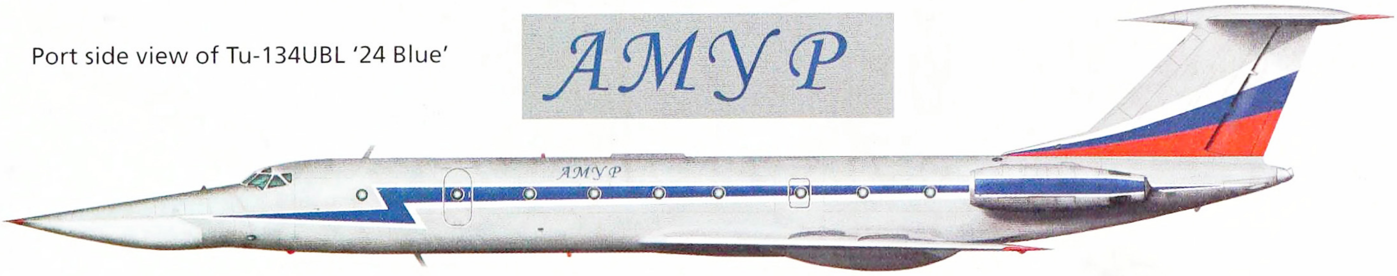
within the structure of the 5th Air Army. The town of Anadyr' on Chukotka was specified as the location. The base's personnel and hardware were sourced from a large number of previously disbanded units.

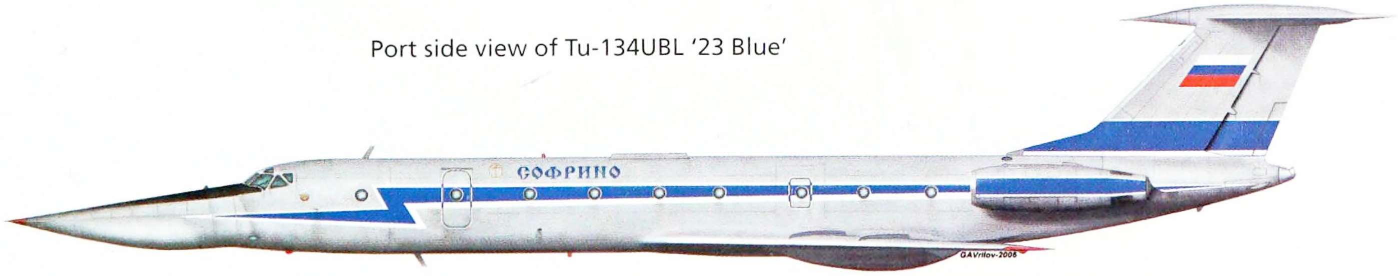
The base's main purpose was to provide maintenance support for the combat operations of Long-Range Aviation and Air Defence Force units, as well as for the crews of aircraft making positioning flights. In the half a century of the base's existence a lot of work has been done to construct a runway and maintain it in proper condition in the severe climate of Chukotka.

In 1998 the 445th Air Base was transformed into the 361st Aviation Commandant's Office (AK – *aviatsi***on***naya komenda***too***ra*). The airfield at Anadyr' with its communications and air traffic control and landing systems is maintained in constant readiness.

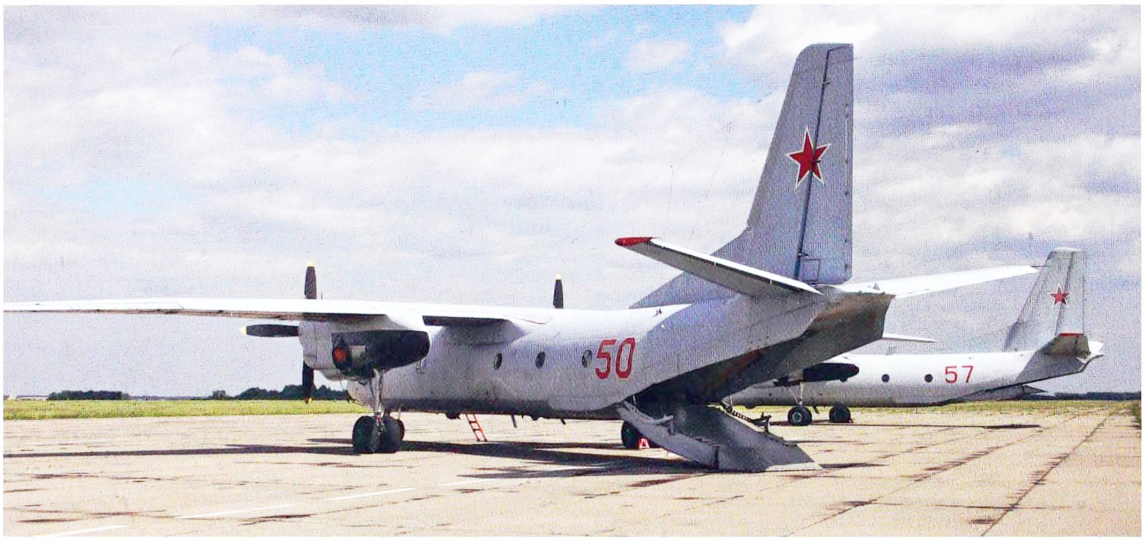

Port side view of Tu-134UBL '18 Blue'

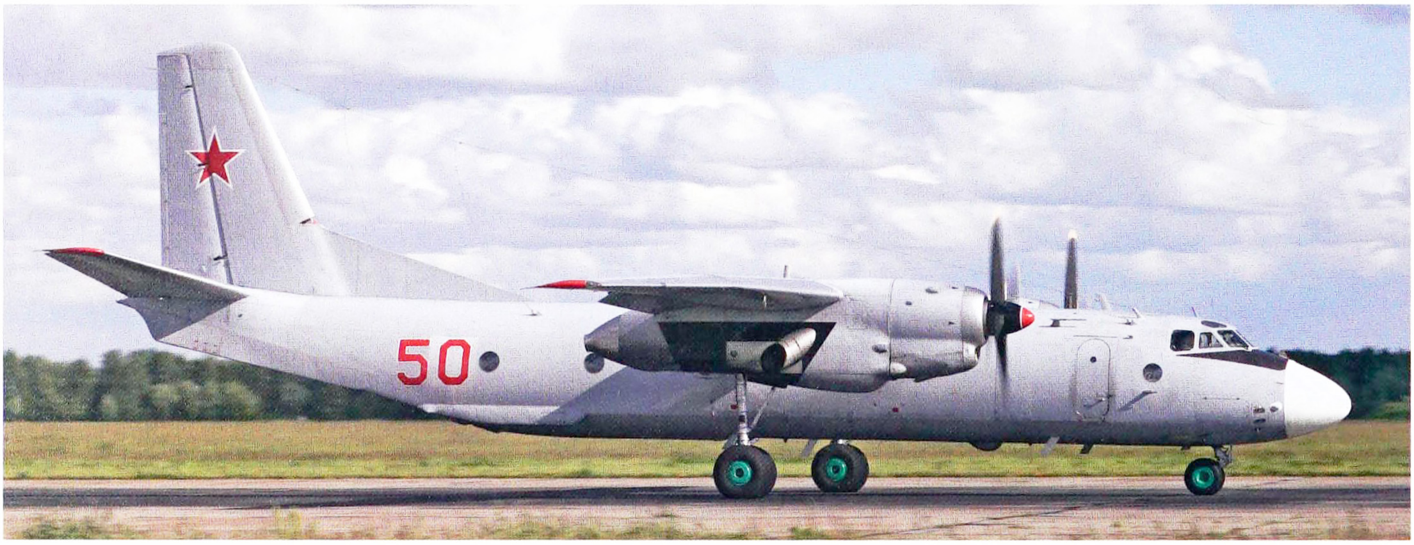

Port side view of Tu-134UBL *Ural*


Port side view of Tu-134UBL '24 Blue'

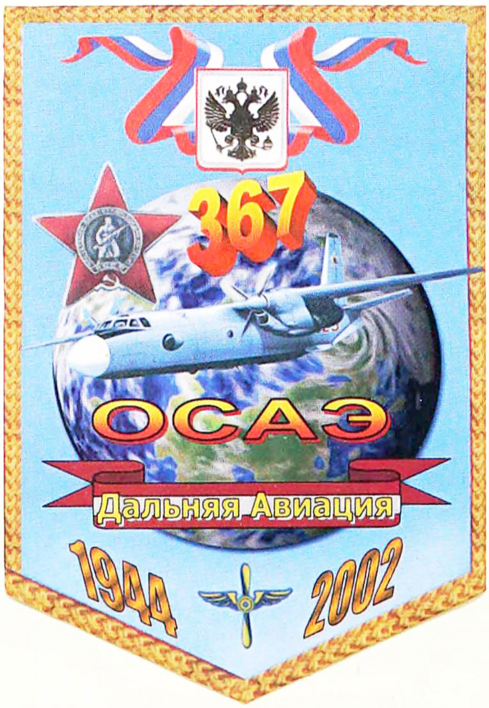

Port side view of Tu-134UBL '23 Blue'

'50 Red' and '57 Red', a pair of An-26s operated by the Long-Range Aviation's 367th OSAE.





The same An-26 '50 Red' taking off; note the spinner colours.



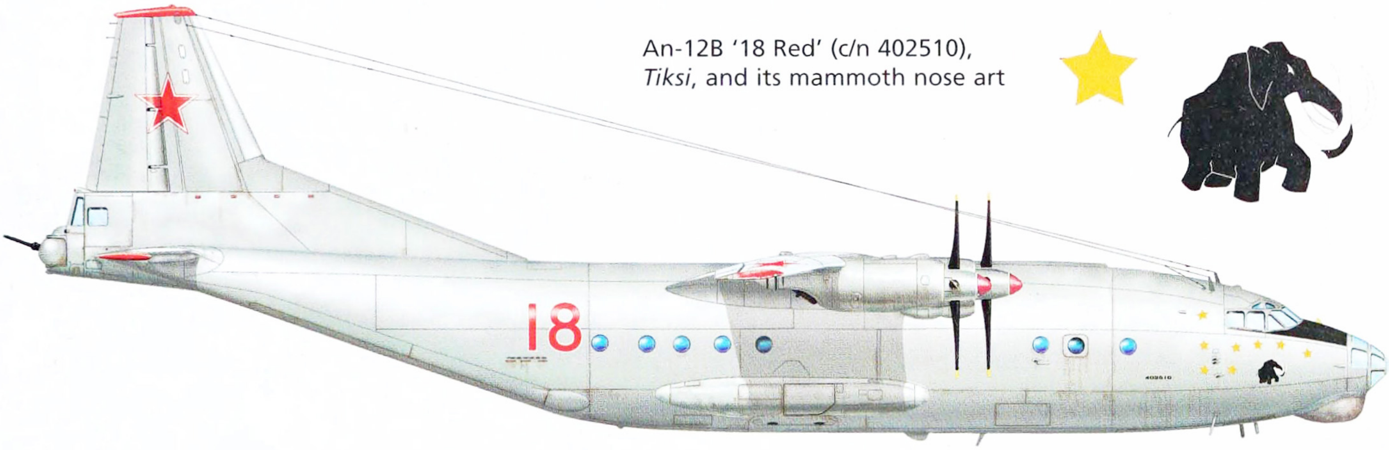
The pennant of the 367th OSAE decorated with the Red Star Order.

527th Aviation Commandant's Office, Vorkuta

In the early 1950s the Soviet Union was very active constructing auxiliary airfields in the High North in case it became necessary to deliver an air strike against the potential adversary (the USA) across the North Pole. One such base was built near the settlement of Amderma in the Arkhangel'sk Region. In keeping with a Soviet MoD General Staff directive dated 31st December 1954, on 1st June 1955 the Long-Range Aviation started forming the 250th Air Base there. The base was a part of the DA's Arctic Operations Group (OGA – *Opera**tiv**naya **groop**pa v **Ark**tike*).

The base's structure includes various services: security, communications, weather, food supply, repair, firefighting and so on. Primary attention was given to creating all the necessary conditions for supporting combat operations of aircraft.

On 9th August 1956 the 250th Air Base began redeploying to Vorkuta in the Komi



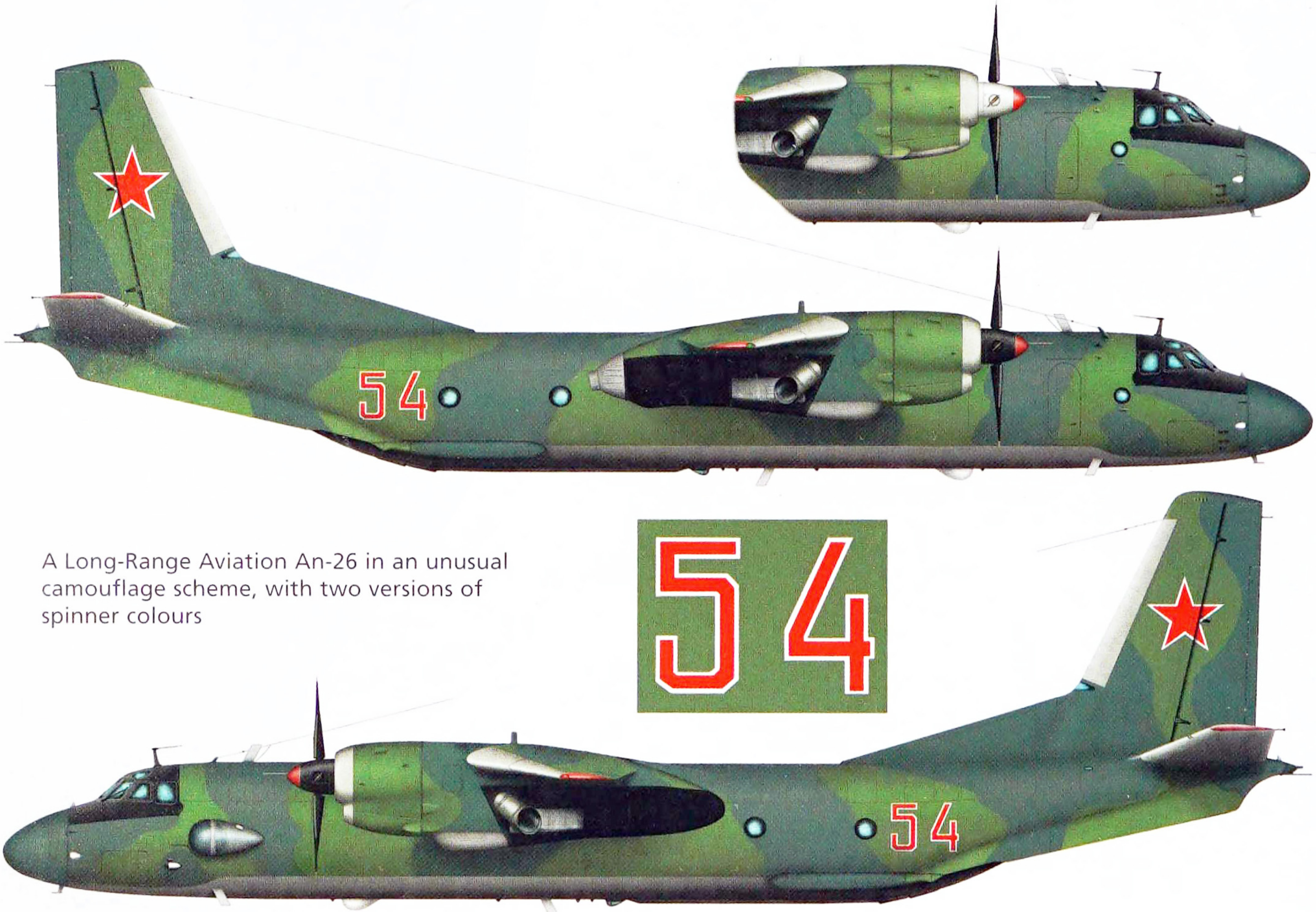
An-12B '18 Red' (c/n 402510), *Tiksi*, and its mammoth nose art

Autonomous Soviet Socialist Republic (now the Komi Republic in the Russian Federation).

On 23rd August 1993 one of the base's flight crews was lost in action. All four engines of an An-12 transport captained by Maj. A. N. Yepanishnikov quit unexpectedly when the aircraft was near Volgograd in southern Russia. The captain did all he could to direct the stricken aircraft away from a residential area. All members of the crew were posthumously given state awards, Maj. Yepanishnikov receiving the Hero of Russia title.

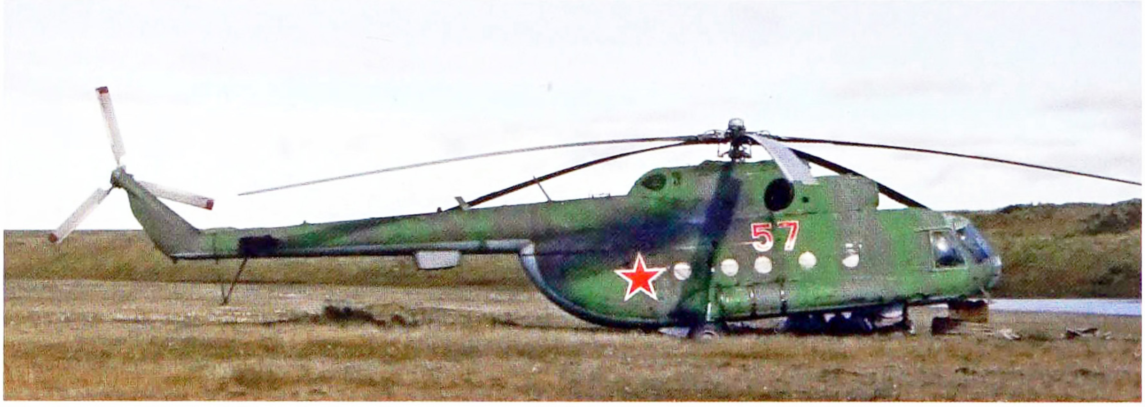
On 1st August 1998 the base was reorganised as the 527th AK, Lt.-Col. V. G. Radchenko being appointed its commander. In 2008 M. Solovey was the acting base commander.

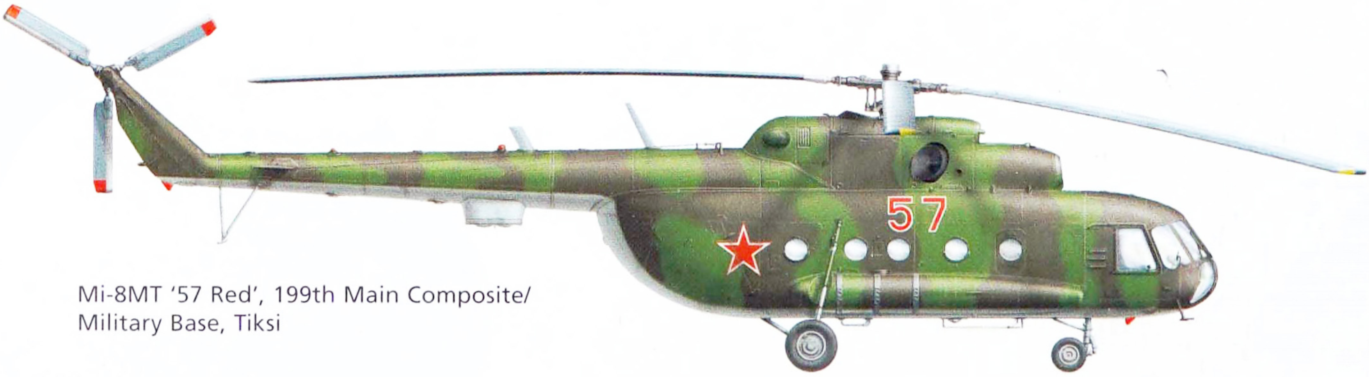
RA-11414, a quasi-civil An-12BK (c/n 9346507), also wears mammoth nose art.



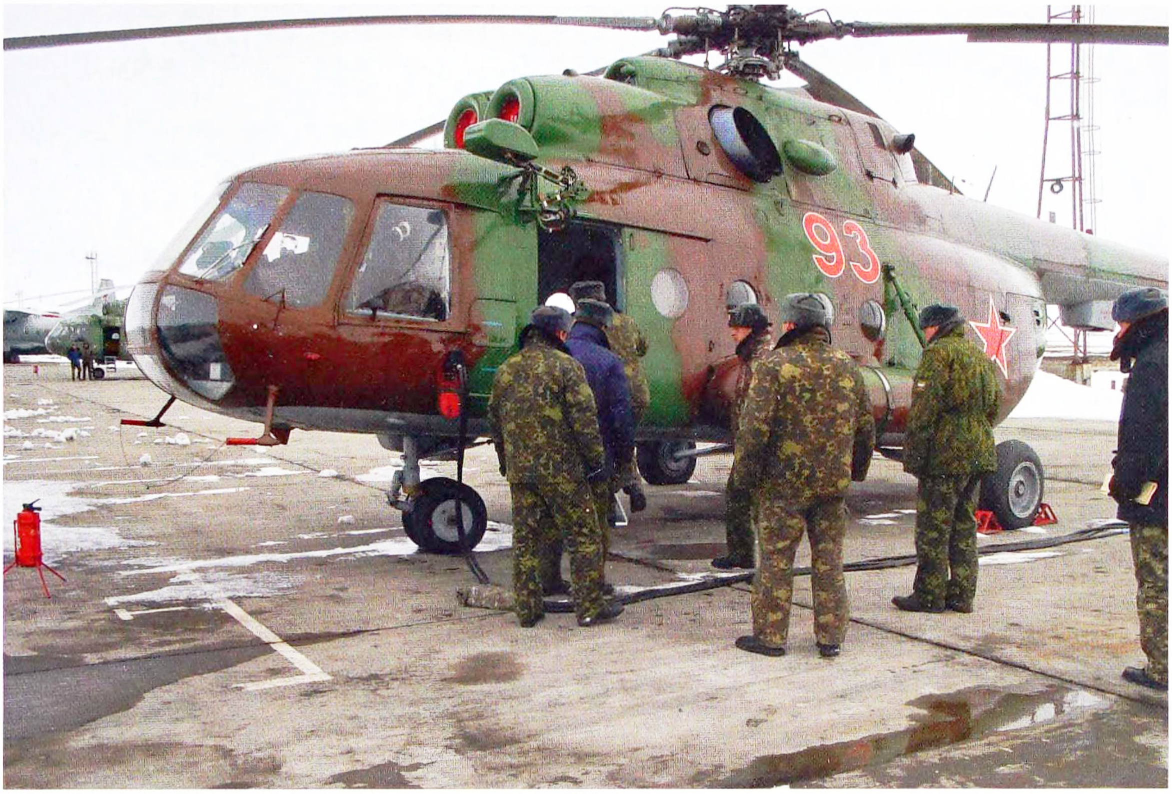
A Long-Range Aviation An-26 in an unusual camouflage scheme, with two versions of spinner colours

'57 Red', a Mil' Mi-8MT operated by the Long-Range Aviation.

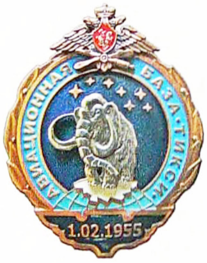




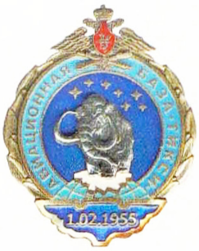
Mi-8MT '57 Red', 199th Main Composite/ Military Base, Tiksi



'93 Red', another Mi-8MT in Long-Range Aviation service.


АВИАЦИОННАЯ БАЗА ТИКСИ
1.02.1955

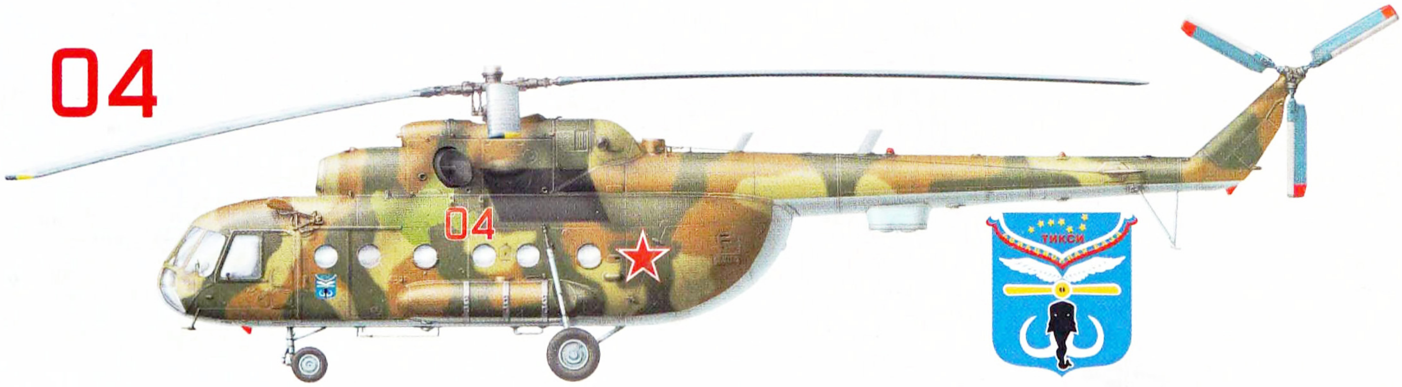
Two versions of the Tiksi bases's badge.


АВИАЦИОННАЯ БАЗА ТИКСИ
1.02.1955

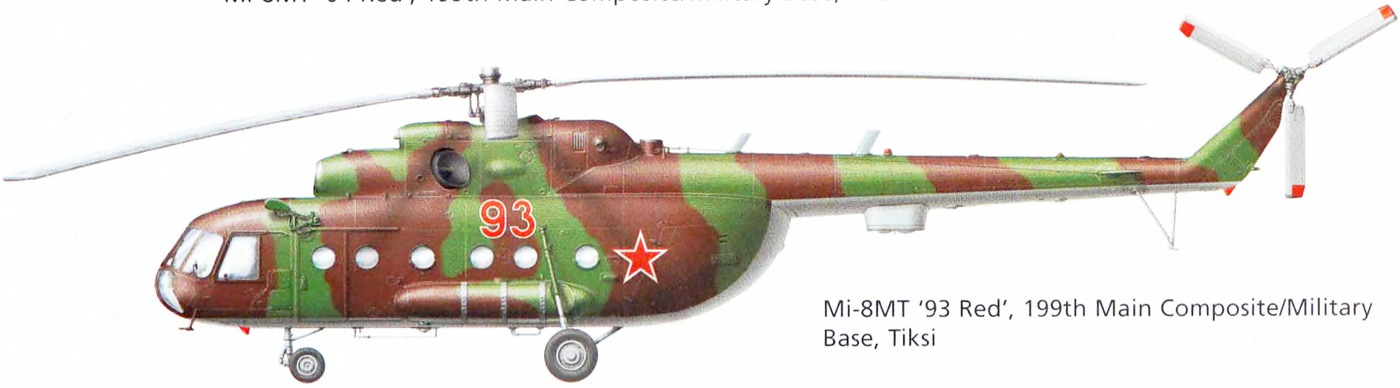
During its nearly 50-year history the function of the base, and subsequently commandant's office, has not changed – to maintain the runway and airfield services in complete readiness for receiving Long-Range Aviation aircraft.

199th Aviation Commandant's Office, Kamensk-Ural'skiy

On 1st December 1989 the 2256th Aircraft Maintenance Base located at Kamensk-Ural'skiy AB near Travyanistoye settlement, Sverdlovsk Region, was renamed the 467th



Mi-8MT '04 Red', 199th Main Composite/Military Base, Tiksi



Mi-8MT '93 Red', 199th Main Composite/Military Base, Tiksi

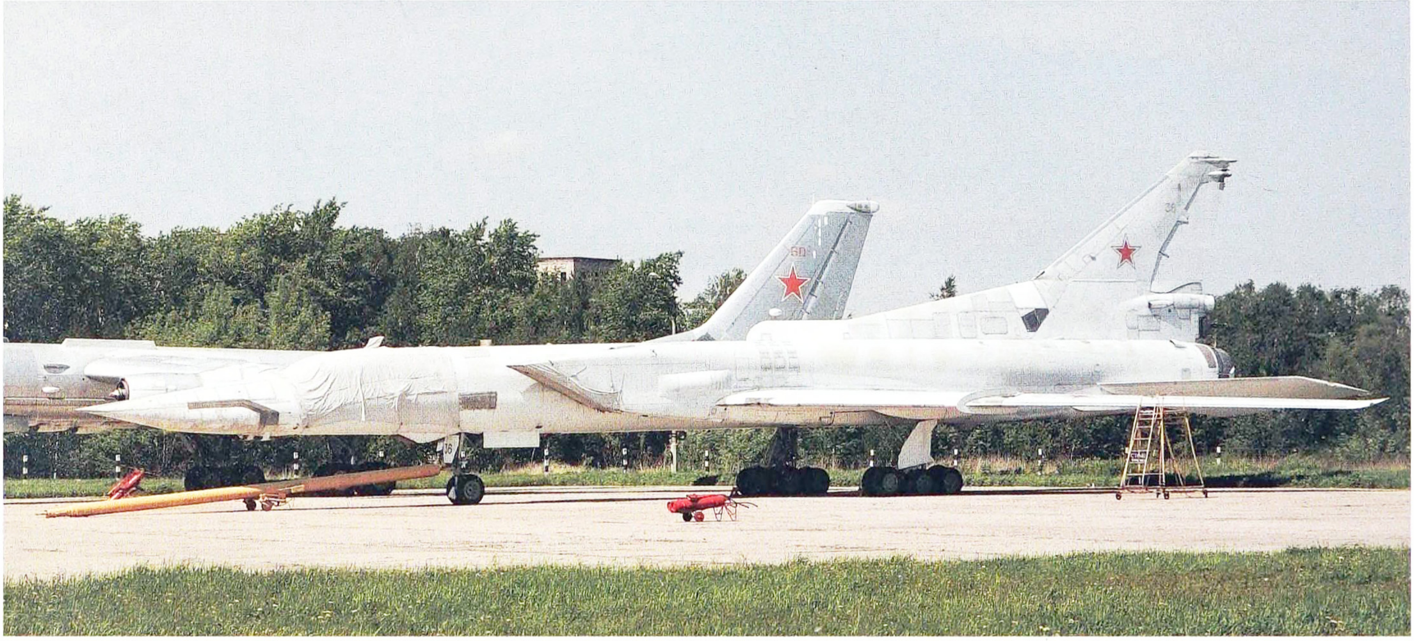
The logo of the Russian MoD’s 360th Aircraft Repair Plant overhauling DA aircraft.

OBATO (*ot**del’**naya **ba**za aviatsi**on**no-tekh**nich**eskovo obes**pech**eniya* – Independent Aircraft Maintenance & Support Base). On 25th June 1998 it changed its name again to the 199th AK. Just over a month later, on 1st August, the 199th AK was organisationally included into the Long-Range Aviation’s 43rd TsBP i PLS.

In 2008 the base commander was Major S. Polishchuk.

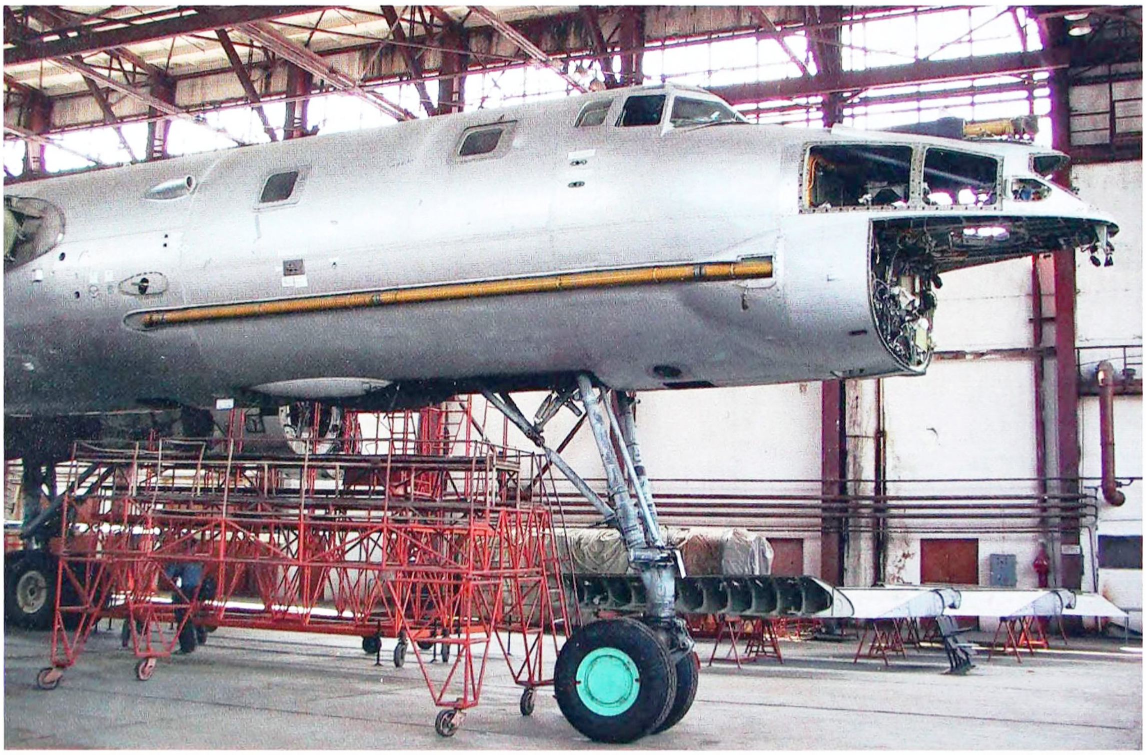
1425th Special and Physical Training Centre, Irkutsk

This unit is responsible for physical training of Long-Range Aviation crews to help them cope with physically harrowing missions lasting ten hours or more. In 2008 the Centre was commanded by Colonel A. Navitsyn.



’36 Red’, one of the few Tu-22MR reconnaissance aircraft, awaiting refurbishment at the 360th Aircraft Repair Plant.

A simpler badge of the 360th ARZ.



A Tu-95MS stripped down for refurbishment at the 360th ARZ, Dyagilevo AB.

4 Russian Long-Range Aviation Bases

The following is a list of the principal bases used by the Long-Range Aviation (37th (Strategic) Air Army) immediately prior to the reorganisation begun in 2009. Some were dual-purpose airfields (that is, airports with military facilities). Some of the bases have since been closed.

Engels-2

Air Base No. 6950 (Engels-2 AB) is located near the town of Engels (Saratov Region) in southern Russia. The base was home to two heavy bomber regiments having Guards status – the 121st *Sevastopol'skiy* GvTBAP and the 184th *Poltavsko-Berlinskiy* GvTBAP decorated with the Red Banner Order and the Lenin Order; the units operated the Tu-160 and the Tu-95MS respectively. Both units were part of the 22nd GvTBAD. In the course of the 2009 reorganisation the two regiments were merged into a single air base.

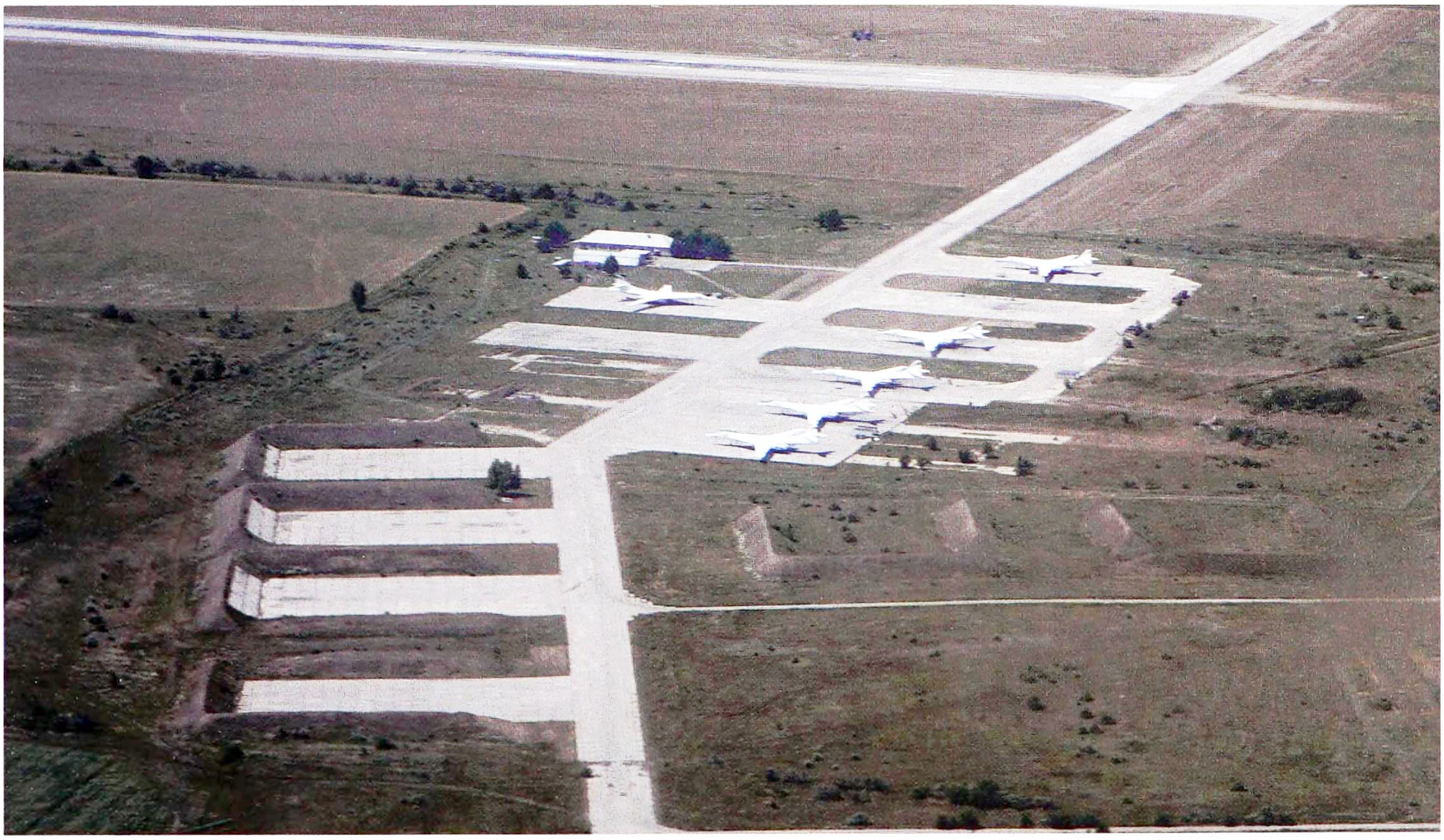
Engels-2 AB is the sole Russian airbase to host the Tu-160 strategic missile carrier. The unit maintains constant readiness, and several of the Tu-160s are on round-the-clock quick-reaction alert.

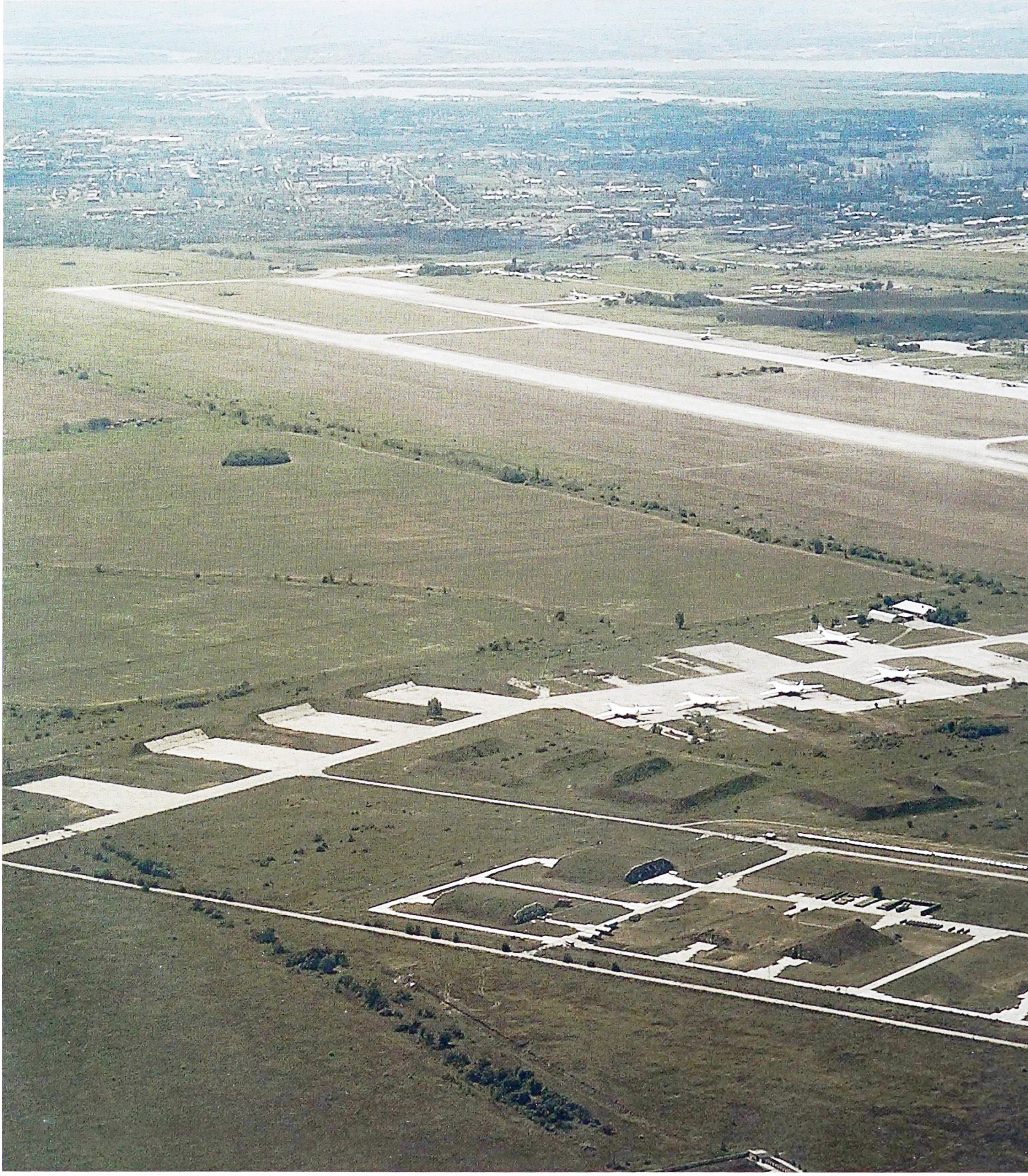
The base has a single concrete runway (04-22) 3,500 m (11,480 ft) long and 100 m (330 ft) wide.

Base co-ordinates: 51°28'47.26"N, 46°12'49.45"E

The base also hosts the Long-Range Aviation Museum. This unique open-air display was opened on 6th September 2000 and the museum receives more than 5,000 visitors annually. The museum's collection includes:

- aircraft: Ilyushin IL-62 *Classic* airliner (VIP configuration), Myasishchev 3MS-2 tanker, Antonov An-12 transport, An-24 *Coke* airliner (modified), Tupolev Tu-95KM missile carrier, Tu-22KD missile carrier, Tu-22PD ECM aircraft, Tu-22RDM reconnaissance aircraft and Tu-22U trainer, Tu-134Sh-1 navigator trainer, Tu-134UBL pilot trainer, Aero L-29 Delfin and L-39C Albatros advanced trainers;
- cruise missiles: Kh-55, Kh-22NA, Kh-20M and KSR-2UD;
- bombs: FAB-9000M, FAB-5000M, FAB-3000M, FAB-1500M, FAB-500M, FAB-250M and FAB-250TS high-explosive bombs, OFAB-250 HE/fragmentation bomb, SAB-250T flare bomb, NOSAB-100TK and DOSAB-100TK marker flare bombs.





Above and previous page: Runway 22 and the flight line at Engels-2 AB with the 121st GvTBAP dispersal in the foreground.

Shaikovka

Air Base No. 6951 (Shaikovka AB) is located in the Kaluga Region of central Russia, 17 km (10.56 miles) north of Kirov (this town is not to be confused with the identically named city further east in the Urals Mountains!). The base was home to the 52nd TBAP equipped with Tu-22M3 bombers, which was likewise part of the 22nd GvTBAD. Additionally, between 1990 and 1998 Shaikovka also hosted a fighter unit equipped with MiG-29 light tactical fighters and a military airlift unit. In 2009

the 52nd GvTBAP merged with the 840th TBAP based at Sol'tsy AB (see below).

The base has a single concrete runway (16-34) 2,500 m (8,200 ft) long.

Base co-ordinates: 54°13'32.20"N
34°22'10.00"E

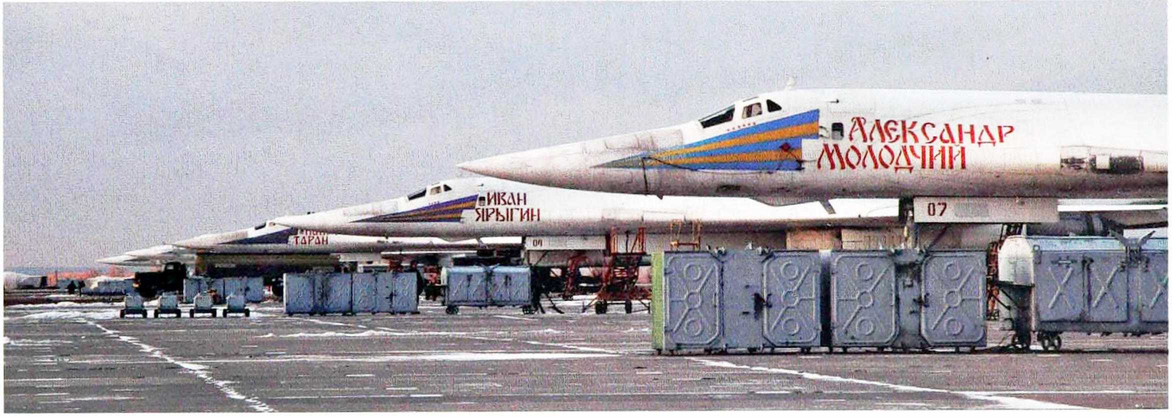
Ookraïnka

Air Base No. 6952 (Ookraïnka AB, aka Seryshevo) is located in the Seryshevo District of the Amur Region in the Russian Far East, 28 km (17.4 miles) north of the town of Belogorsk. The base hosted the command

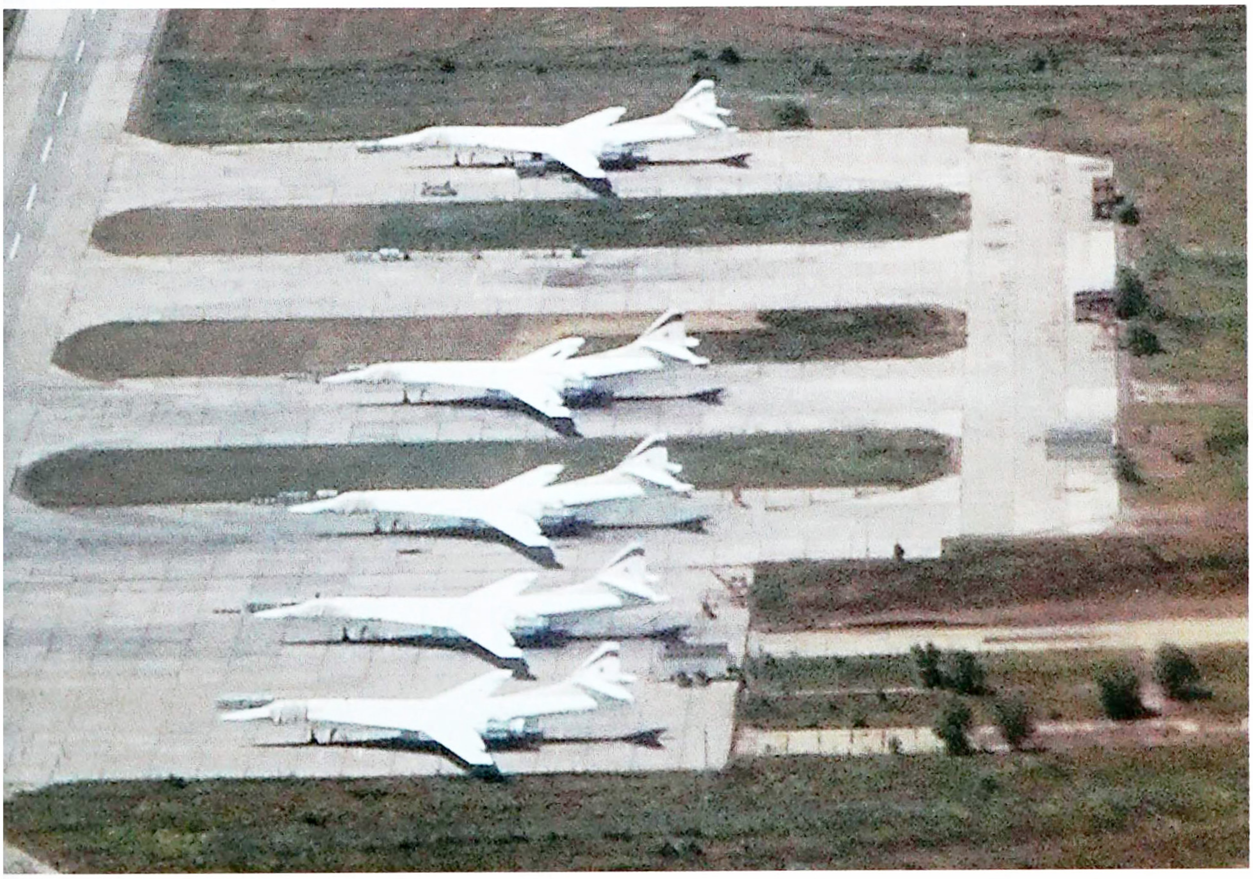
Tu-160s on the 12st GvTBAP flight line at the north-east end of Engels-2 AB.

The 184th TBAP flight line with Tu-95MSs at the south-west end of Engels-2 AB.

The dispersal area at the south-east of Engels-2 AB with six more Tu-160s.

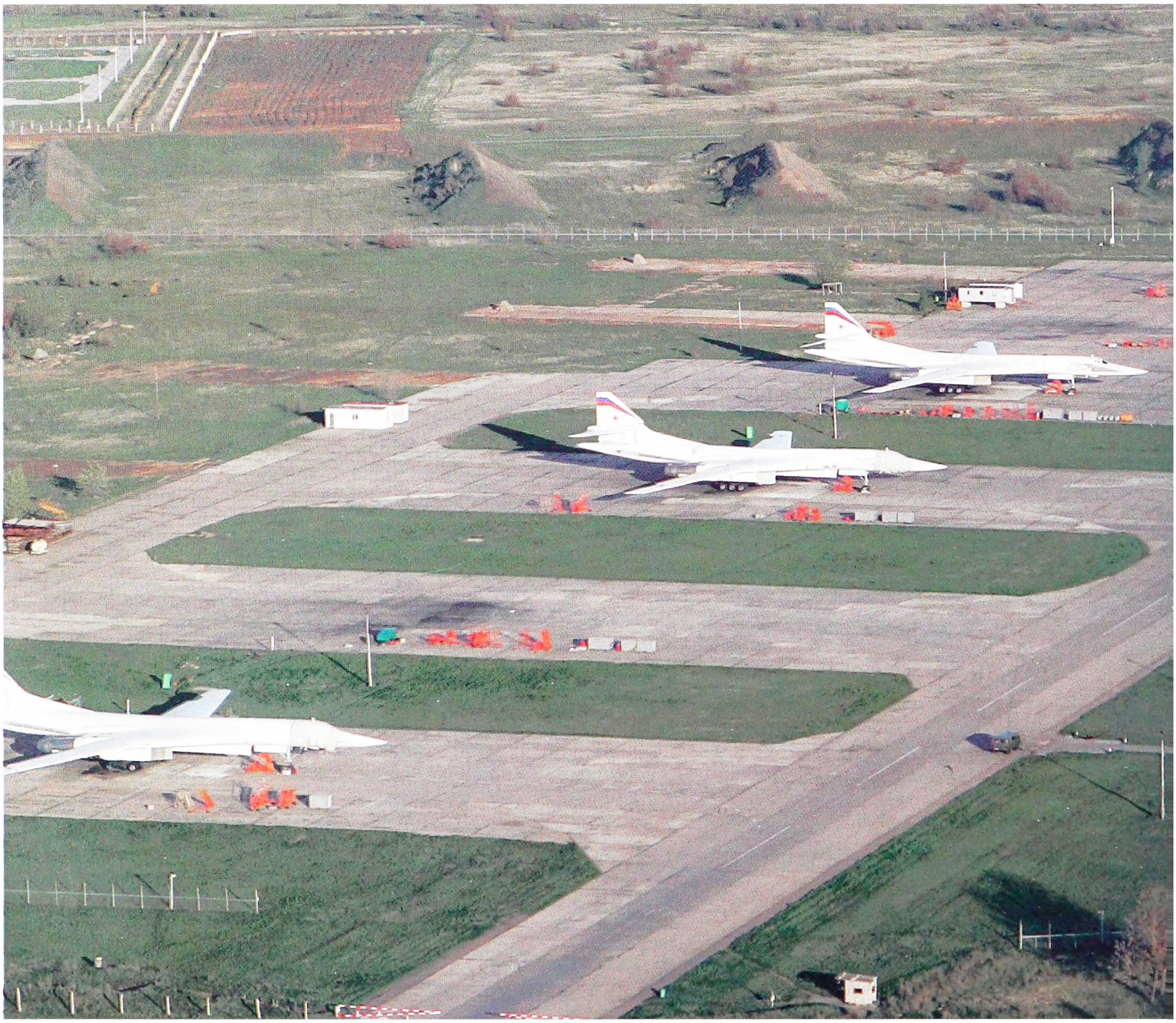

АЛЕКСАНДР
МОЛОДЧИЙ
07
ИВАН
ЯРЫГИН
ТАРАН

Another view of *Blackjacks* on the 121st GvTBAP flight line. The metal boxes house support equipment.



A plinth at Engels showing the Russian Long-Range Aviation's first and latest heavy bombers – the Sikorsky 'Il'ya Muromets' of World War One vintage and the Tu-160.

ДАЛЬНЯЯ АВИАЦИЯ
42152
ИЛЬЯ МУРОМЕЦ
ТУ-160



of the 326th TBAD forming part of the 37th (Strategic) Air Army of the Supreme High Command, as well as two heavy bomber regiments – the 182nd *Sevastopol'sko-Berlinskiy* GvTBAP decorated with the Red Banner Order and the 79th TBAP decorated with the Red Star Order. Both regiments operated the Tu-95MS strategic missile carrier; they merged into a single air base in 2009.

The base has a single concrete runway 3,500 m (11,480 ft) long.

Base co-ordinates:	51°09'56.97"N 128°26'52.51"E

Belaya

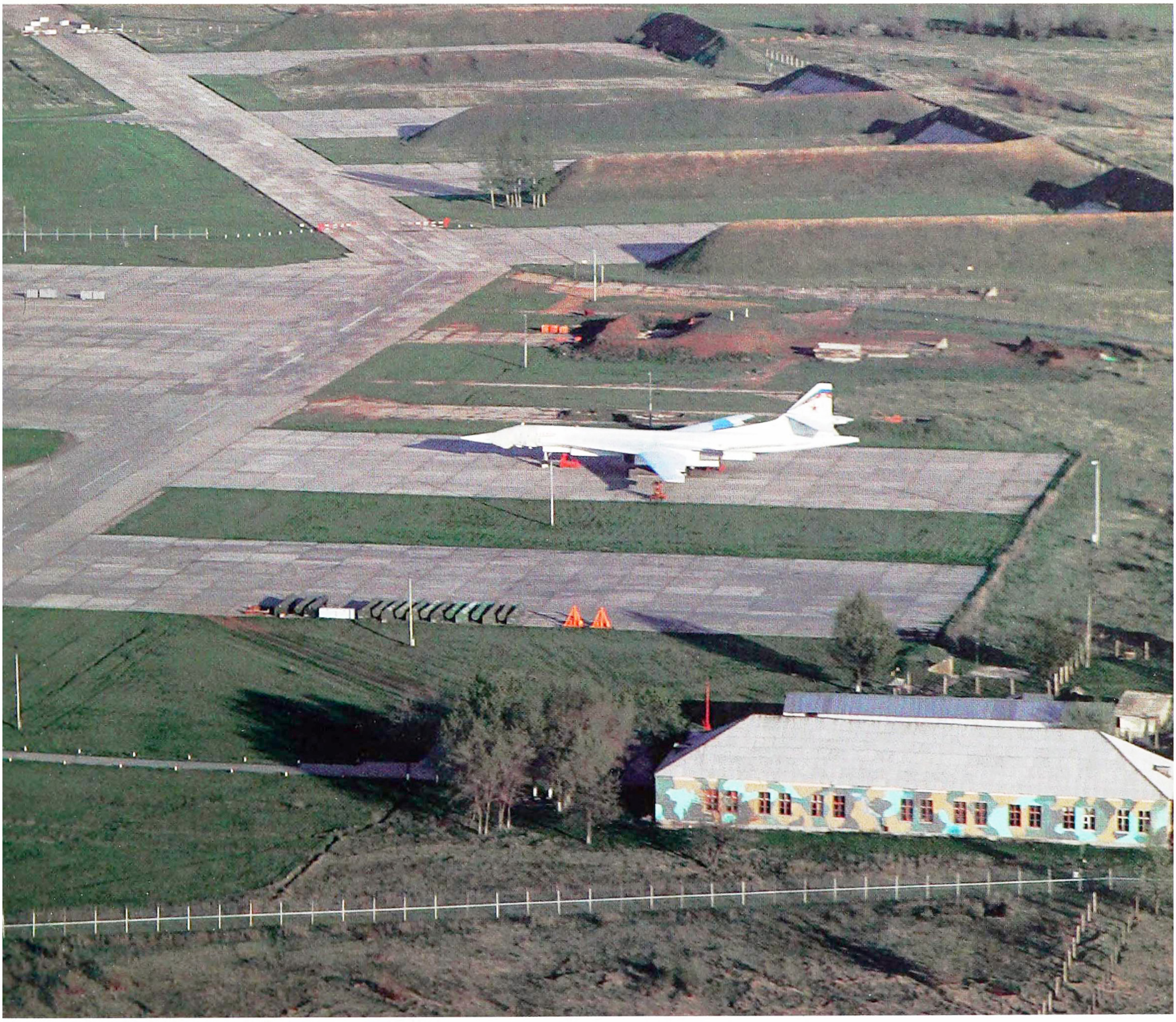
Air Base No. 6953 (Belaya AB) is located in the Irkutsk Region of East Siberia, 18 km (11.18 miles) north-west of the town of Usol'ye-Sibirskoye and 85 km (52.82 miles) north-west of the city of Irkutsk. The base hosted the 200th *Brestskiy* GvTBAP decorated with the Red Banner Order, which was part of the 326th TBAD and operated Tu-22M3 missile carriers. In 2009 the unit merged with the 444th TBAP at Vozdvizhenka.

The base has a single concrete runway 4,000 m (13,120 ft) long and 80 m (260 ft) wide.

Base co-ordinates:	52°54'53.26"N 103°34'31.77"E

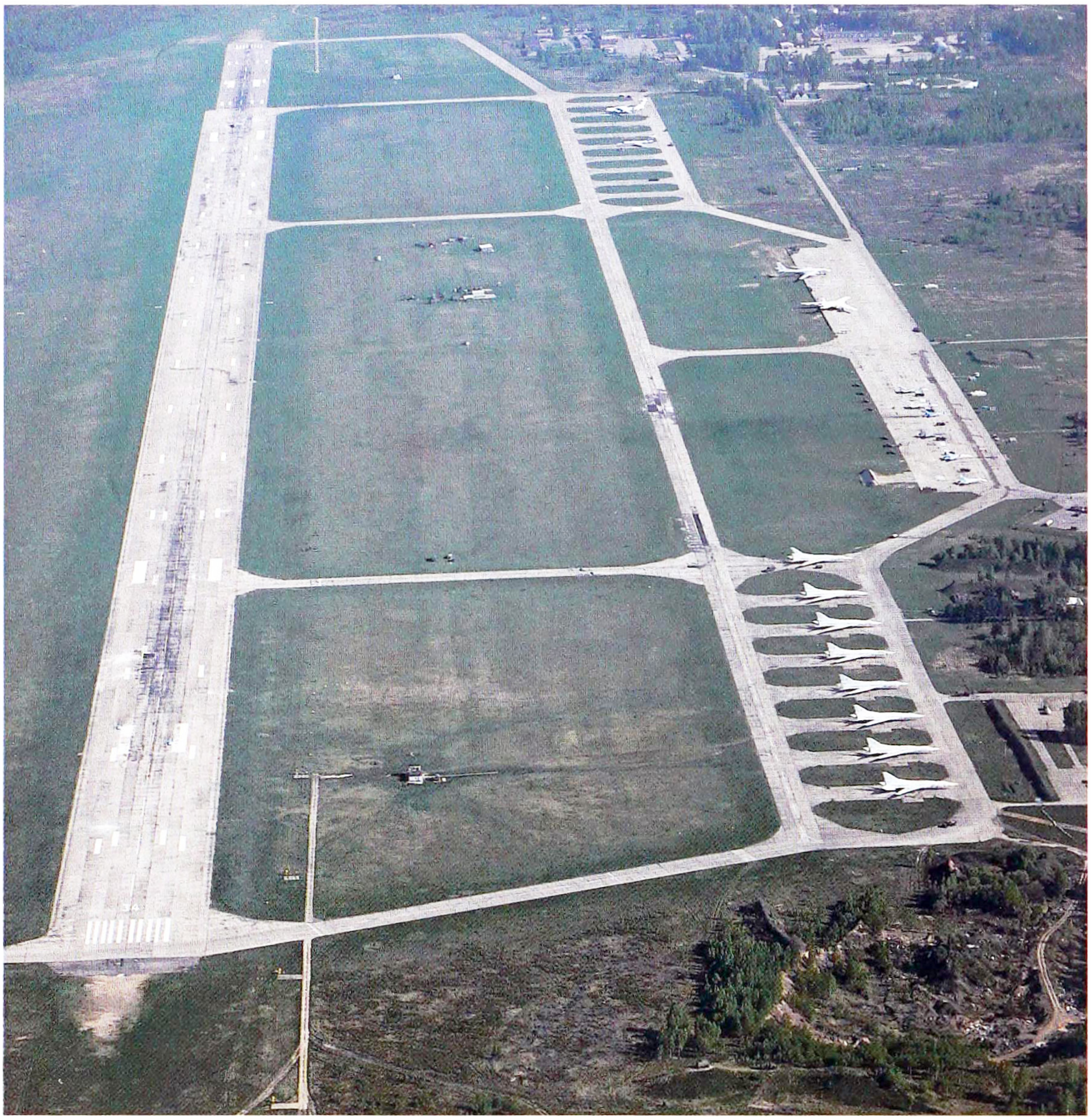
Dyagilevo

Air Base No. 6954 (Dyagilevo AB) is located in the Ryazan' Region of central Russia, 11 km (6.84 miles) west of the city of Ryazan'. The base is currently home to the 203rd GvAPSZ



One more aerial; view of the dispersals and revetments at Engels.

Overall view of Shaikovka AB with runway 34, the 52nd GvTBAP Tu-22M3s on their hardstands, plus MiG-29s, a Tu-95MS and a Tu-160 on the flight line. Note the runway extension at the north end.



The taxiway leading to the dispersal area in the south-western corner of the base.

'24 Red', a 52nd GvTBAP Tu-22M3, at Shaikovka with all four canopy doors open.

equipped with IL-78 and IL-78M tankers, as well as to the Long-Range Aviation's 43rd Combat Training & Aircrew Conversion Centre operating Tu-22M3 and Tu-95MS missile carriers. Additionally, Dyagilevo AB hosts the Russian MoD's 360th Aircraft Repair Plant which refurbishes and upgrades the same bomber types.

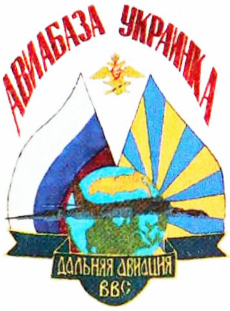
The base has a single concrete runway (06-24) 3,000 m (9,840 ft) long and 70 m (230 ft) wide.

Base co-ordinates:	54°38'44.53"N 39°34'18.49"E

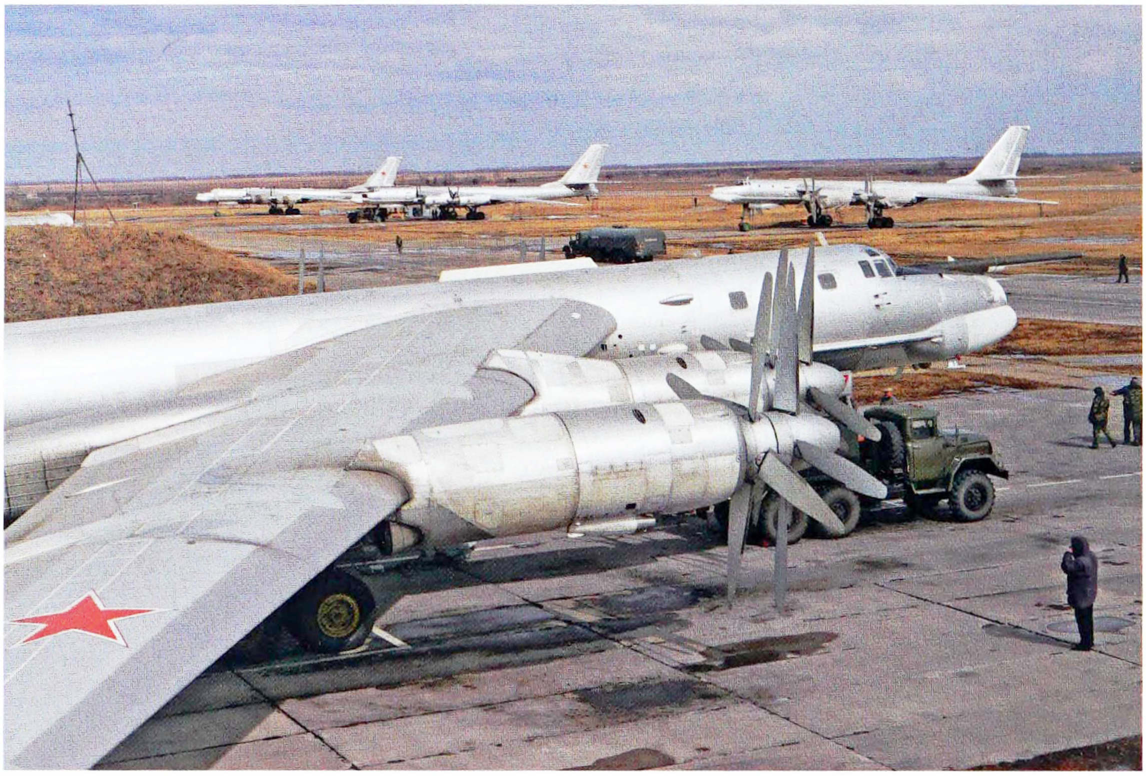
Tambov

Air Base No. 1449 (Tambov-Vostochnyy AB) is located in the Tambov Region of central Russia. The base used to be the training facility of the Tambov Military Pilot College (TVVAUL) – the Long-Range Aviation's principal primary flight training establishment. Now only the commandant's office remains.

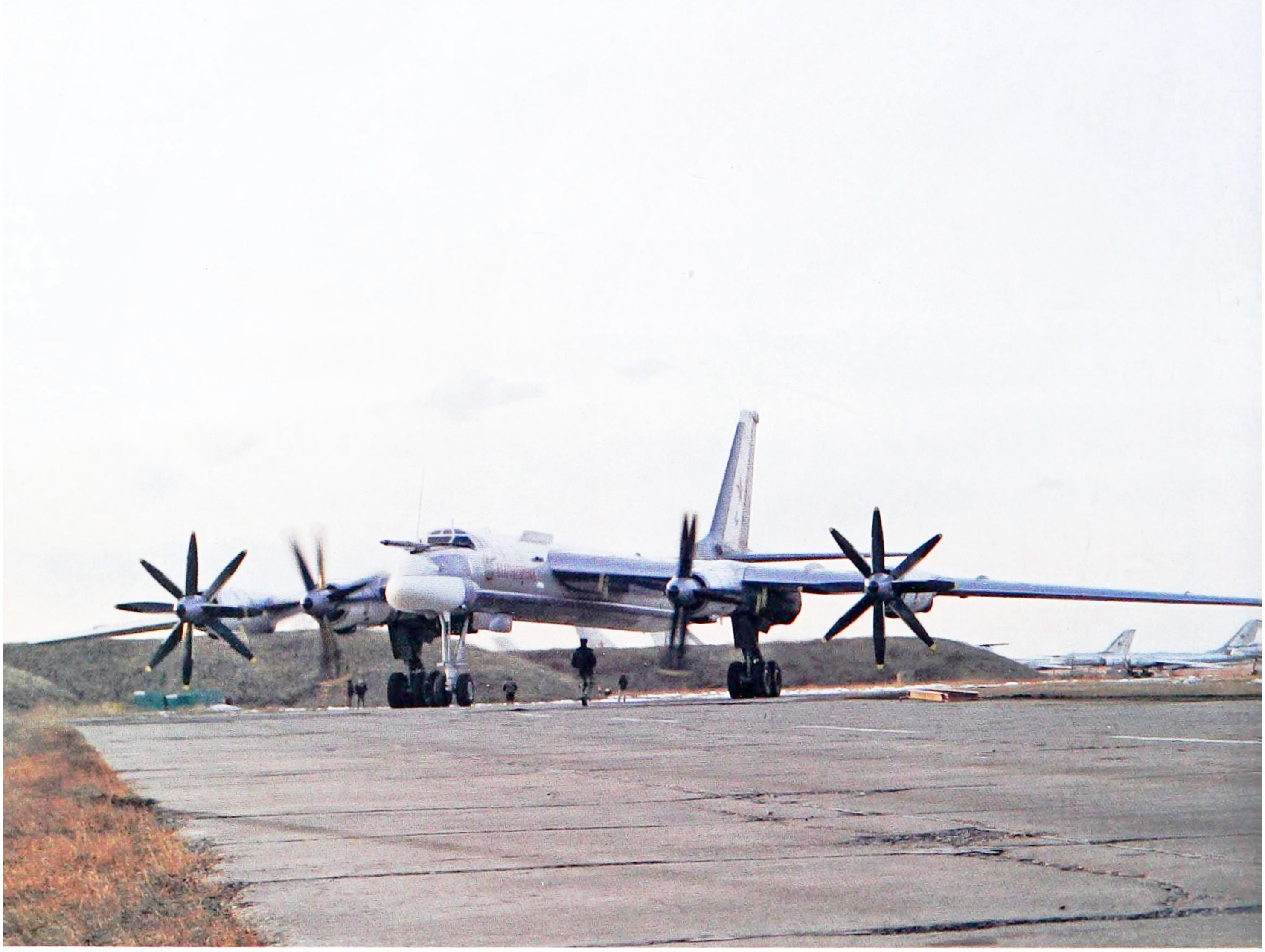
The revetments at Shaikovka have concrete jet blast deflectors.


АВИАБАЗА УКРАИНКА
ДАЛЬНЯЯ АВИАЦИЯ
ВВС

The crest of Ookraïnka AB.



182nd GvTBAP Tu-95MSs on the dispersal at Ookraïnka.



Tu-95MS '59 Red' *Blagoveshchensk* is greeted by the 79th TBAP personnel on returning to Ookraïnka AB.

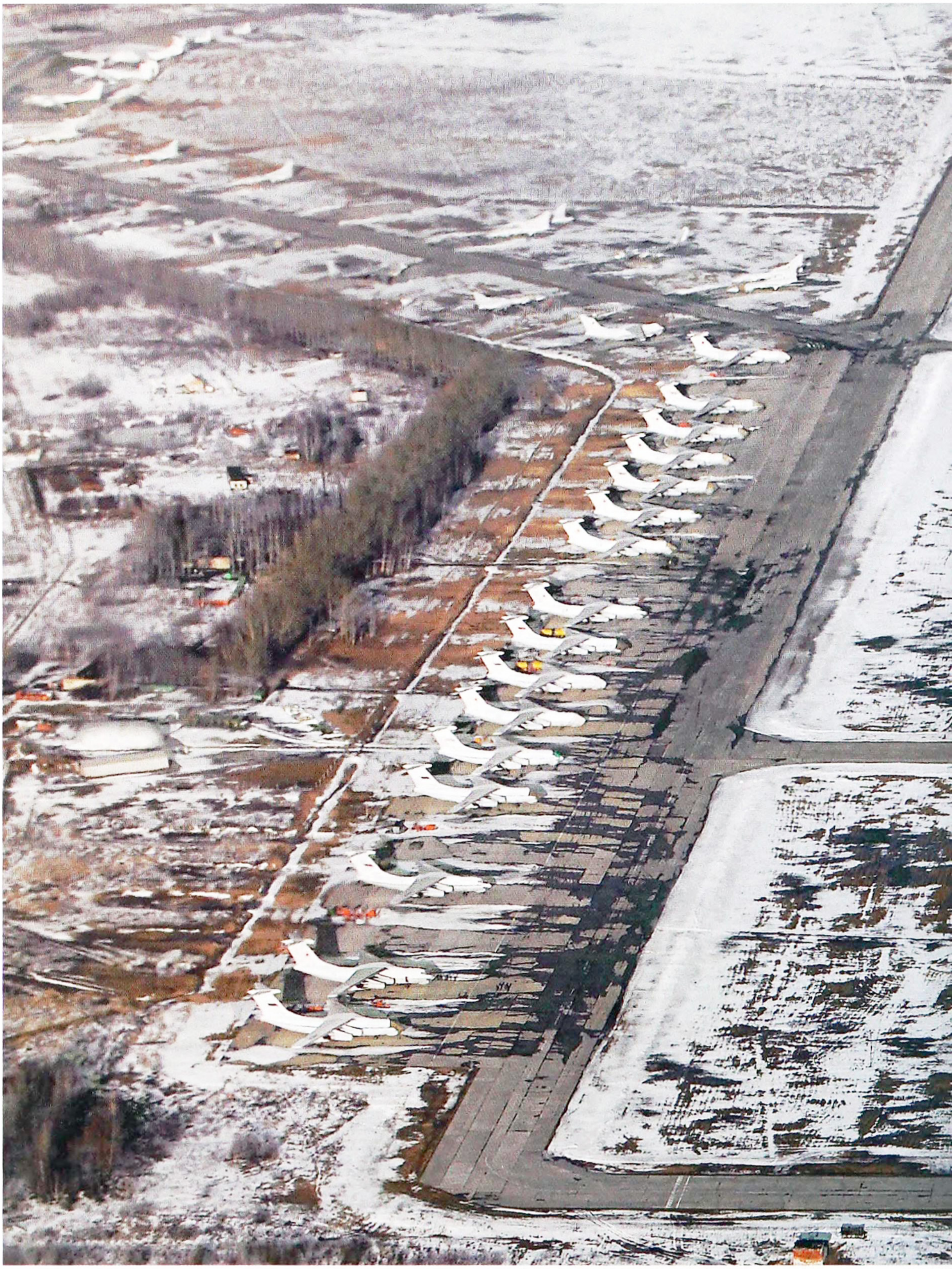
59

The base hosts three auxiliary aircraft types operated by the Long-Range Aviation – the An-26 transport, Tu-134UBL pilot trainer and IL-18 *Coot* airliner; many of the aircraft are in flyable storage.

The base has a single concrete runway 2,500 m (8,200 ft) long and 47 m (154 ft) wide.

Tiksi-3

Air Base No. 199 (Tiksi-3 AB) is both a commercial airport and a military base located 7 km (4.35 miles) north of Tiksi settlement, Republic of Yakutia. The civil apron is the base of Polar Airlines (*Po**lyar**nyye **A**via**lin**ii*), one of Yakutia's air carriers, while the military apron is occupied by Air Force and Federal Security



Aerial view of Dyagilevo AB, Ryazan' with runway 06, the 203rd GvOAPSZ hardstand (with IL-78 tankers) in the foreground. The 43rd TsBP i PLS dispersal with Tu-22M3s and Tu-95MSs can be seen beyond. Two tankers have just landed.

Service (FSB)/Border Guards aircraft. DA aircraft use the airfield as a staging point, pausing to top up their tanks during ultra-long-range missions.

Tiksi is a Class 1 airfield suitable for most aircraft types with a maximum take-off weight of up to 260 tons (573,200 lb). The concrete runway is 3,000 m (9,840 ft) long and 60 m (200 ft) wide; the pavement is 24 to 44 cm (9.45 to 17.32 in) thick and is reinforced by a metal grid with squares measuring 30 x 30 cm (11.81 x 11.81 in). The main pavement is made up of concrete slabs 7 x 7 m (23 x 23 ft). The paved runway was constructed back in 1958; additional taxiways were built in 1964, while airport expansion work

The 203rd GvOAPSZ flight line at Dyagilevo AB.

The 203rd Regiment started life as a bomber unit (203rd GvTBAP).

was undertaken in 1975. A major reconstruction began in 1986 but dragged on until 1995 because of scant financing. In 2005 it was decided to resurface the runway and aprons, and a tender for this work was announced in 2007.

Base co-ordinates: 71°41'51.07"N 128°54'12.69"E

Anadyr' (Oogol'nyy airport)

Anadyr'-Oogol'nyy is again a commercial airport with military facilities. It is located on

Another view of the tankers lined up in the south-western part of the base.

Tu-95MSs make a stopover at Anadyr' airport, with Chukotavia aircraft in the background.

Chukotka near Oogol'nyy settlement which gave the airport its name. It was part of the Arctic Operations Group (OGA) and was used by the DA for a long time as a forward operating location (FOL) for refuelling stopovers on ultra-long-range missions. The 361st Aviation Commandant's Office is deployed full time to ensure the base's operation.

The base has a single runway 3,500 m (11,480 ft) long and 60 m (200 ft) wide.

Base co-ordinates: 64°44'08.67"N 177°44'34.02"E

Vorkuta

Vorkuta is another FOL used for refuelling stopovers on ultra-long-range missions. The 527th Aviation Commandant's Office is deployed full time to ensure the base's operation.

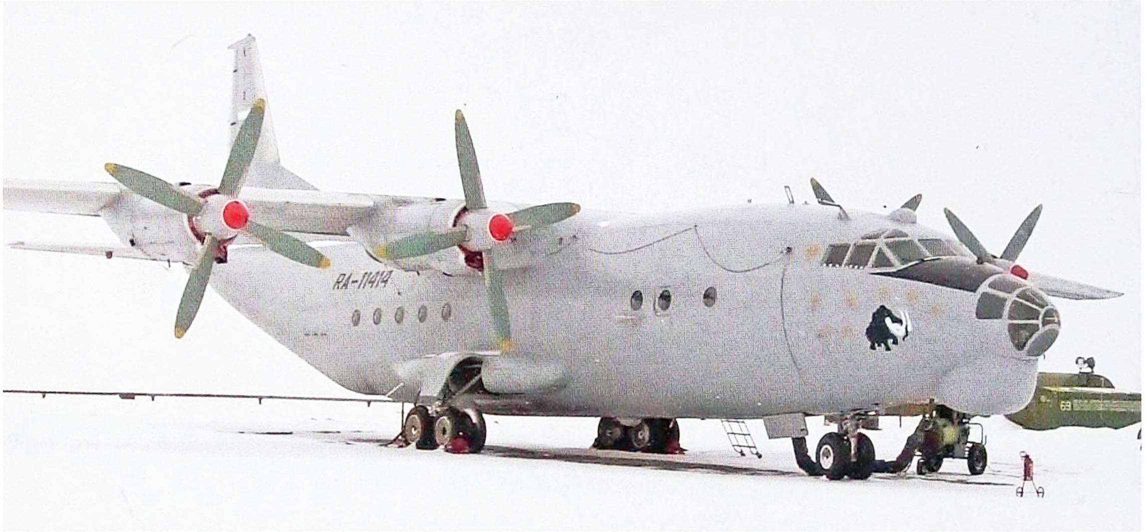
The base has a single concrete runway 3,500 m (11,480 ft) long and 78 m (256 ft) wide.

Base co-ordinates: 67°27'51.86"N 64°18'27.20"E

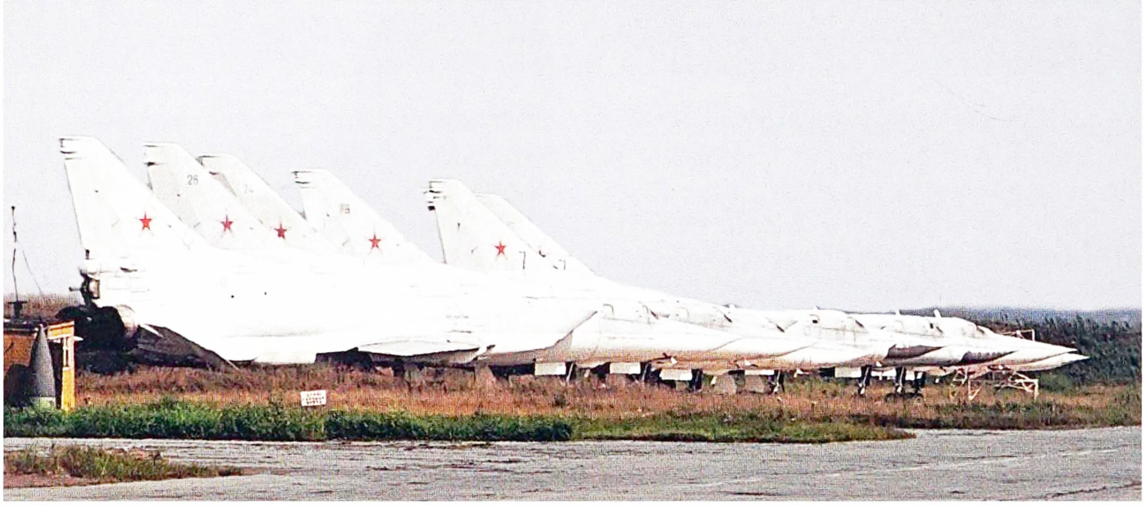
Another view of Tu-95MSs and an IL-78 at Anadyr'.

БЛАГОВЕЩЕНСК

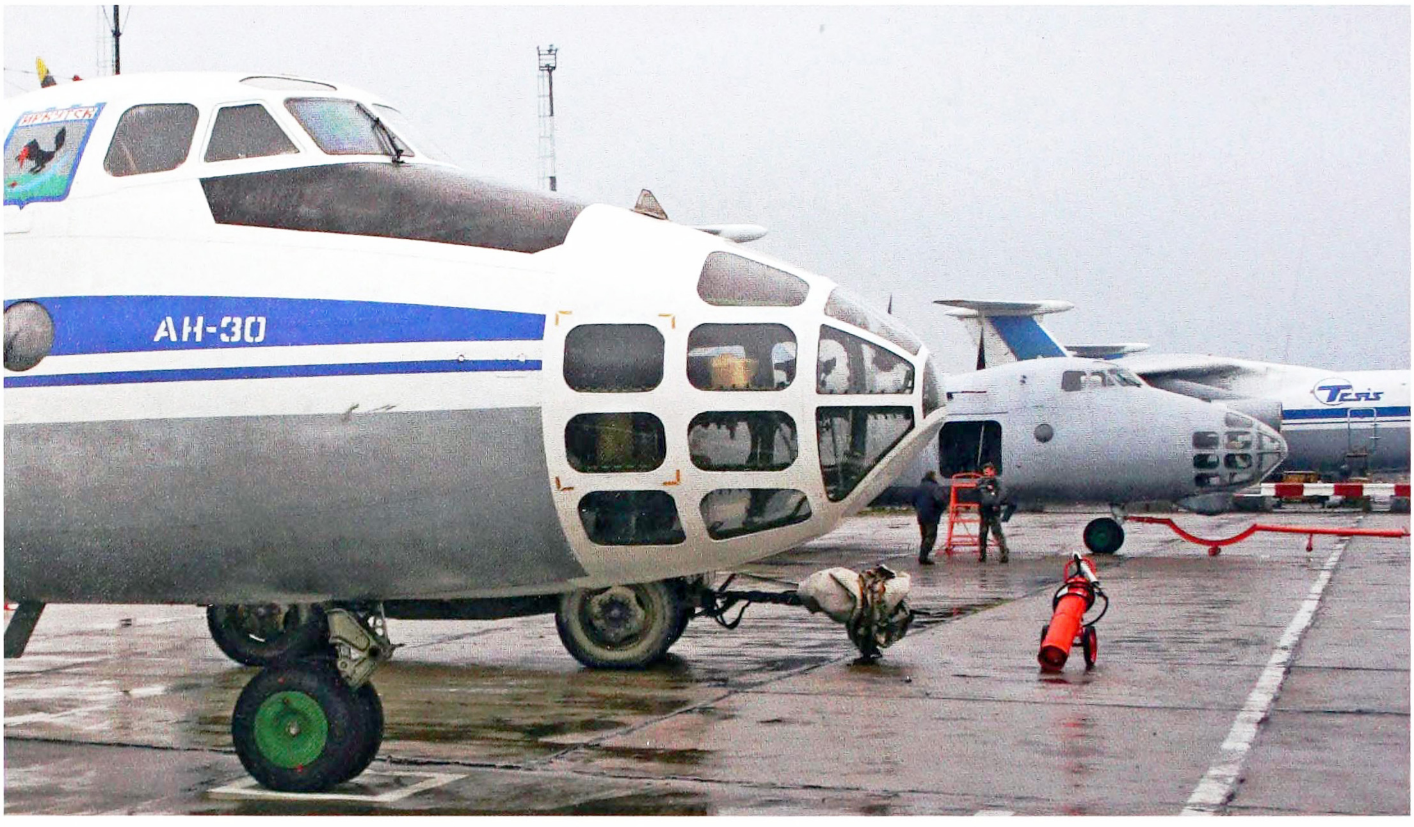
Resident An-12BK RA-11414 is hooked up to a mobile air heater at Tiksi.



The flight line at Vozdvizhenka AB, which was demoted to a reserve base in late 2009.



181st OAE An-30s on the military apron at Irkutsk-1 airport.



5 Ever Ready for Action

As noted earlier, the dissolution of the Soviet Union wrought havoc with the Russian Armed Forces in general and the Air Force in particular. In the mid-1990s, as a result of funding shortfalls and fuel shortages, the Long-Range Aviation was compelled to curtail its planned flying programmes, especially the long-range over-water navigational training flights, to the barest minimum. The airmen began to lose proficiency in the use of their aircraft's weapon systems, while the aircraft themselves became increasingly unserviceable because of the long periods spent idle on the ground. Many were in desperate need of major repair work. Thus, Russia's strategic bomber arm was unable to fulfil its mission properly.

In February 1992 the 1096th TBAP based at Engels-2 AB began its conversion to the Tu-160. On 22nd October that year one of the unit's *Blackjacks* made the first practice launch of a Kh-55SM long-range cruise missile; launched from high altitude, the missile destroyed the practice target successfully.

Quite apart from political chaos and financial troubles, the demise of the Soviet Union triggered ethnic conflicts and civil wars in the former Soviet republics. As the local factions fought for power, destabilising the situation on Russia's borders, this was perceived as a threat to Russia's security, and the Russian Air Force was put into action. DA aircraft participated in several local wars in the CIS, including Tajikistan where Islamic fundamentalists sought to topple the government. The 840th TBAP flew several sorties against the guerrillas, attacking their positions with free-fall HE bombs.

The Long-Range Aviation was also involved in the action on the North Caucasian theatre of operations (the Chechen Wars), albeit on a limited scale. In addition to attacks against guerrilla positions, the DA aircraft dropped flare bombs, illuminating the targets for other Russian aircraft during night operations.

Strange as it may seem, the 1999 conflict in the Balkans (Operation *Allied Force*), when NATO launched

IL-78 '34 Blue' refuels the Flight Research Institute's Su-30 '597 White' en route to an airshow.

bombing raids against targets in Yugoslavia, was a very powerful impetus to the development of the Russian Long-Range Aviation. The Russian political and military leaders, having seen the real capabilities of air power applied to a modern conventional war, decided to take all necessary steps to 'rehabilitate' strategic aviation and its concomitant ability to 'project power' in the shortest possible time frame following the Balkans conflict. In the contemporary conditions, taking account of Russia's geopolitical position, the state of its economy and the (rather limited) ability of the country to finance its armed forces, it was felt that the priorities for Long-Range Aviation were:

- maintaining its combat potential at a level which would guarantee the capability to meet the wide range of strategic deterrence tasks on behalf of Russia;
- extensive upgrading of the existing bomber fleet and its weapons (including medium- and long-range cruise missiles) and the development of future weapons systems;
- bringing the DA up to a daily state of combat readiness which would enable it, on a given timescale, to have immediate use of its manpower and material resources (aircraft and missiles) for the effective execution of its planned range of combat tasks.

In the Summer and Autumn of 1999, Tu-160 and Tu-95MS strategic missile carriers and bombers taking part in a series of exercises performed flights towards the North American continent and thus demonstrated 'Russia's response' to the Allied bombing of the Balkans and to NATO's eastward expansion. Part of the scenario involved flights to within a short distance of the North American continent. These exercises aroused special interest – not least due the fact that Long-Range Aviation's stepped-up activities were unmistakably linked to the harder military-political course pursued by the Russian government. In particular, as early as in the mid-1990s, the 37th Air Army's missile carriers had practiced – for the first time – simulated 'nuclear strikes' against unpopulated regions of the country and over international waters as the strategy of an all-out nuclear war was revisited.

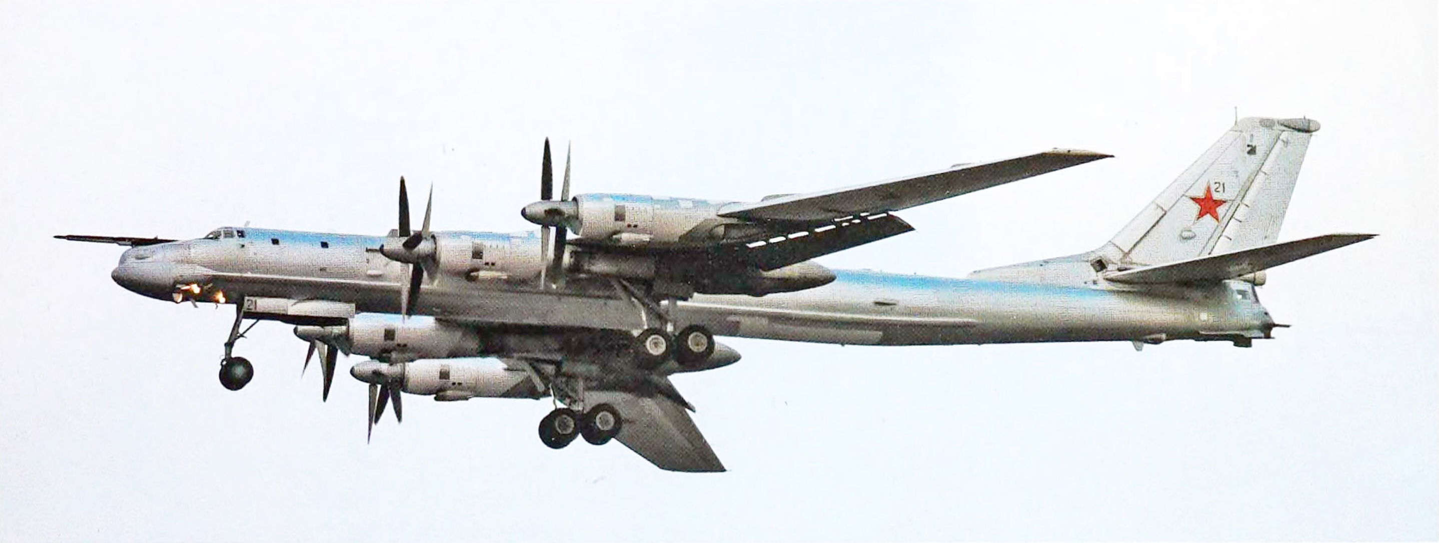
Previous page: A Tu-160 leaves contrails as it prepares to make contact with the tanker.

A Tu-22M3 in 'clean' configuration with the BD-45K wing pylons removed.

Opposite page: A 184th TBAP Tu-95MS ('21 Red') comes home after a training sortie.

It takes a heavy-duty tug, such as the articulated MoAZ-7915, to tow the Tu-160.

Tu-160s, including '02 Red' *Vasiliy Reshetnikov*, on ready alert at Engels.


21
21

ПАВЕЛ
ТАРАН
03
ВАСИЛИЙ

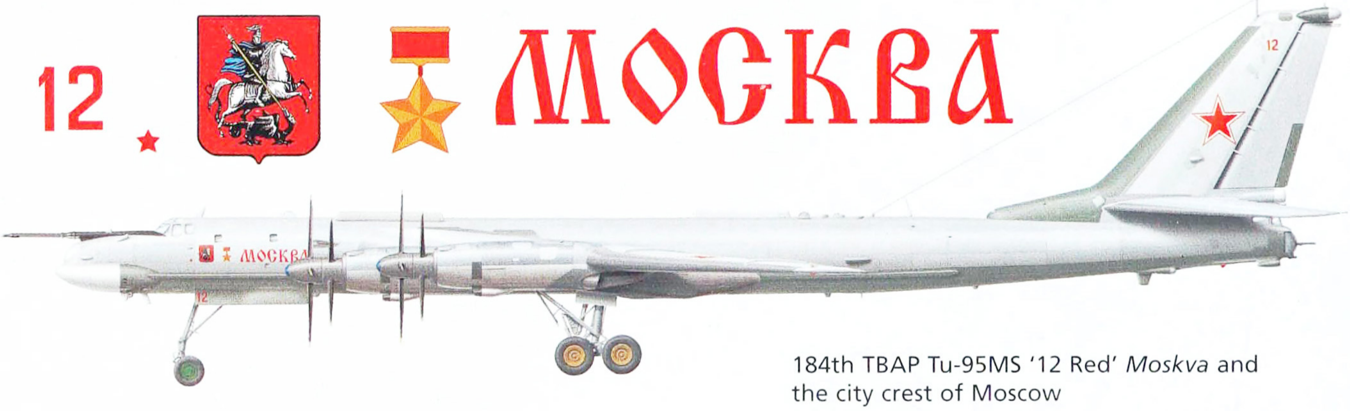
ВАСИЛИЙ
РЕШЕТНИКОВ
02

Tu-95MS '12 Red' *Moskva* and its crew clad in VMSK-3 waterproof flight suits for an overwater mission.

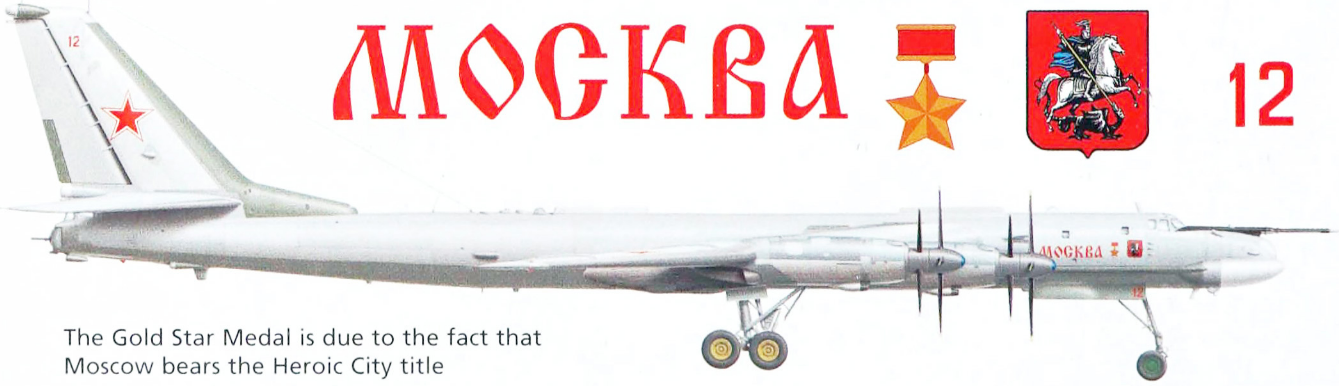
From the late 1990s the resumption of missions flown outside Russia's borders and demonstrative all-arms exercises became a routine in the life of Long-Range Aviation crews. For example, on the night of 25th/26th June 1999 the strategic command/staff exercise *Zapad-99* (West-99) commenced, with significant participation by DA aircraft. A pair of Tu-160s and a pair of Tu-95MSs took off from Engels-2 AB and headed northwards. Having reached their designated waypoint over the Arctic Ocean, they turned southwest. On reaching the Norwegian coast, the bombers parted. The pair of Tu-160s passed down the entire coastline of Norway and carried out a simulated launch of their Kh-55SM long-range air-launched cruise missiles. Next, one of the Tu-160s set course for the Ashuluk weapons training range in southern Russia where the missile was actually launched.

17th September 1999 saw another routine test of combat readiness for the USAF's 3rd Fighter Wing at Elmendorf AFB (Anchorage, Alaska). On that day, two Tu-95MSs of the 326th TBAD took off from Anadyr' air base on the coast of Chukotka, heading east over the international waters of the Pacific. A second pair of *Bear-Hs* took off from the Arctic auxiliary airfield at Tiksi and set course for the Canadian coast, overflying the North Pole. The bombers were under the control of an Ilyushin IL-22 *Coot-B* airborne command post (ABCP) orbiting in the vicinity of the Kamchatka Peninsula. The exercise co-ordinators had decided to order the crews to work in 'clear voice' mode on their radios, to avoid alarming their North American neighbours.

Nevertheless, in the USA the threat was taken seriously, and twenty minutes after the Tu-95MSs had taken off from Anadyr', USAF



184th TBAP Tu-95MS '12 Red' *Moskva* and the city crest of Moscow



The Gold Star Medal is due to the fact that Moscow bears the Heroic City title

Tu-95MS '12 Red' *Moskva* seen as it approaches a tanker over a Winter landscape.

fighters were scrambled to intercept them. They did not close on the Russian aircraft, and visual contact was not established between the *Bears* and the fighters. However, electronic surveillance measures (ESM) used by the Tu-95 crews identified three or four 'attacks' carried out by the F-15s and F-16s in the intercepting group. After carrying out their assigned task, which was, evidently, to simulate the launch of Kh-55SM ALCMs from a notional waypoint over the ocean, the Russian bombers returned to their base.

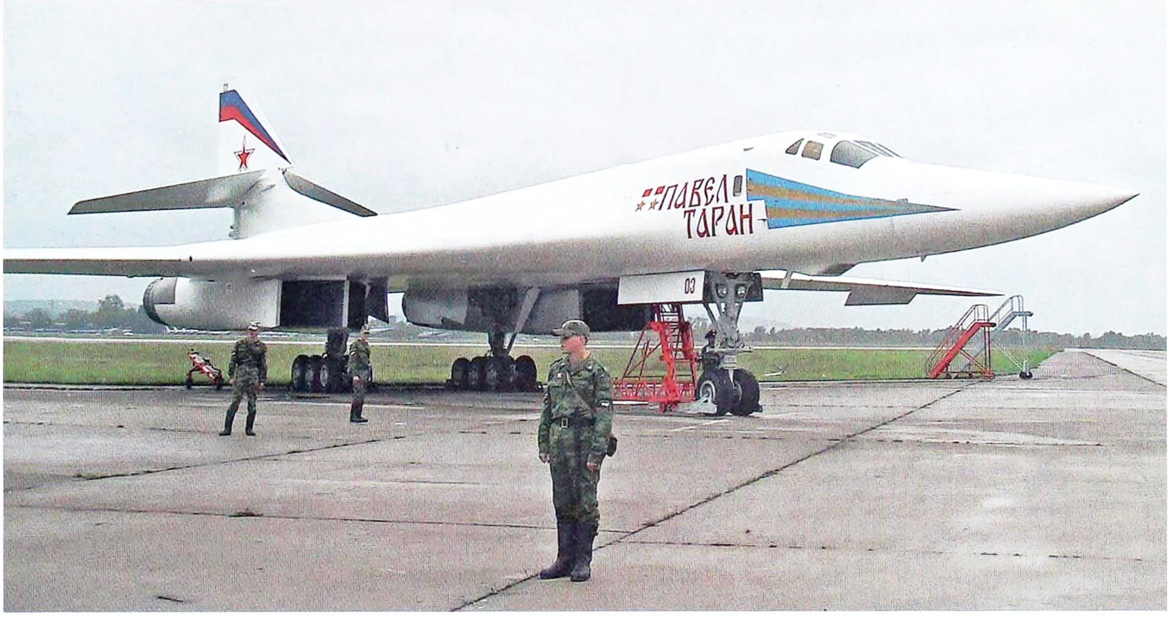
The *Midas* (illustrated by IL-78M '36 Blue') is vital for supporting the DA's operations.

A Tu-160 crew in normal flight suits and ZSh-7 helmets ready for a sortie.

Simultaneously with the flight of the two *Bears*, two Tu-22M3s of the 37th Air Army and two sister ships from the Russian Navy/Pacific Fleet carried out simulated launches of two Kh-22MA (AS-4 *Kitchen*) missiles in the vicinity of the Kamchatka Peninsula. Their targets were a notional 'enemy' carrier strike group. Shore-based missile batteries of the Pacific Fleet on Kamchatka also conducted attacks on the same notional target, firing two Progress (SS-C-1B *Sepal*) coastal defence missiles from a Redoot (Redoubt) launch complex. (The *Sepal* is the land-based variant of one of Russia's earliest cruise missile systems, the SS-N-3 *Shaddock* shipborne surface-to-surface weapon). With the combined efforts of the aircrews of the *Backfires* and the Redoot missile battery, the target was 'destroyed'. Live missile launches were carried out against floating inflatable targets equipped with angle reflectors to create an appropriate radar cross-section.

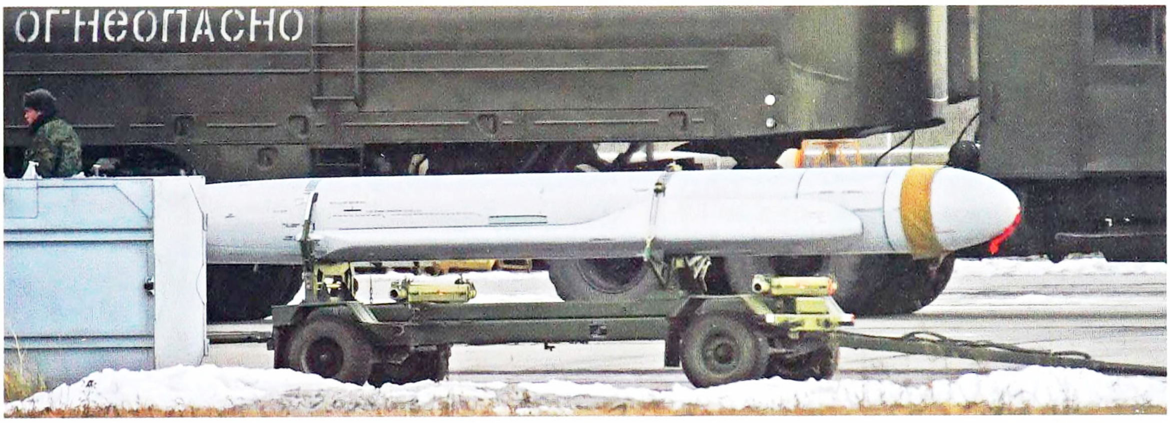
During the course of a later series of exercises in the Russian Far East, a pair of the rare Tu-22MR *Backfire-C* long-range reconnaissance aircraft operating out of Vozdvizhenka AB, accompanied by MiG-31 *Foxhound* interceptors, circumnavigated the inner periphery of the Sea of Japan. Remaining at a distance of 100 km (62 miles) outside Japan's maritime exclusion zone, these aircraft nevertheless caused considerable excitement on the part of the Japanese military in the area. The Tu-22MRs managed to fix the sites of an additional twelve radar units, which had not been switched on during earlier flights by individual aircraft.

Notional attacks from the air and shore missile batteries were the high point of the command/staff exercise which involved the participation of the Russian Air Force, the Pacific Fleet and units of the region's air defence forces. The air assets were commanded by 37th Air Army Commander Lt.-Gen. Mikhail M. Oparin.


ПАВЕЛ
ТАРАН
03

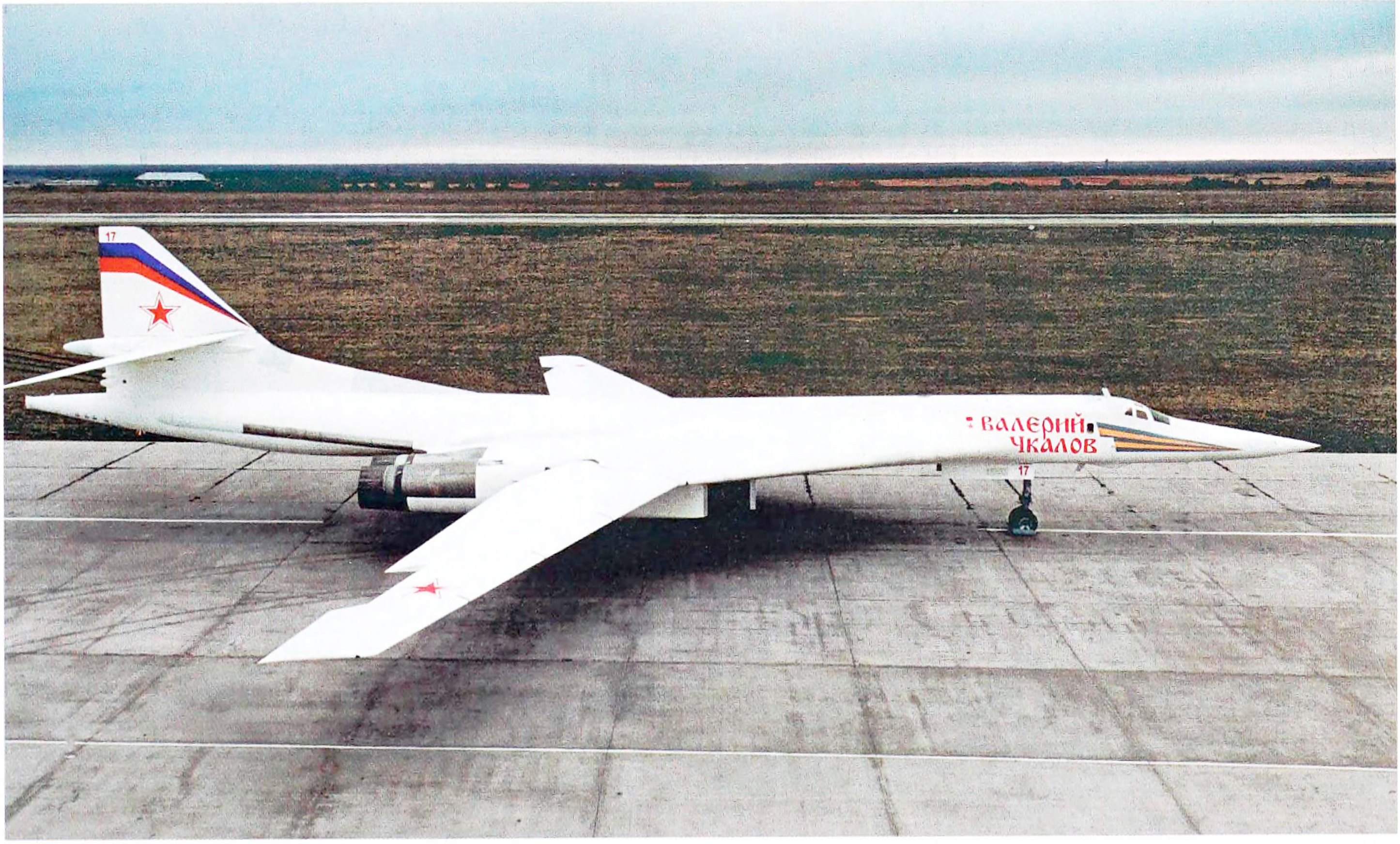
Tu-160 '03 Red' *Pavel Taran* parked at Zhukovskiy, with a sentry posted nearby.

Opposite page: Sister ship '07 Red' *Aleksandr Molodchiy* in brilliant sunshine at Engels.


ОГНЕОПАСНО

A Kh-55SM missile ready for loading into a Tu-160. The yellow band is removed before loading.

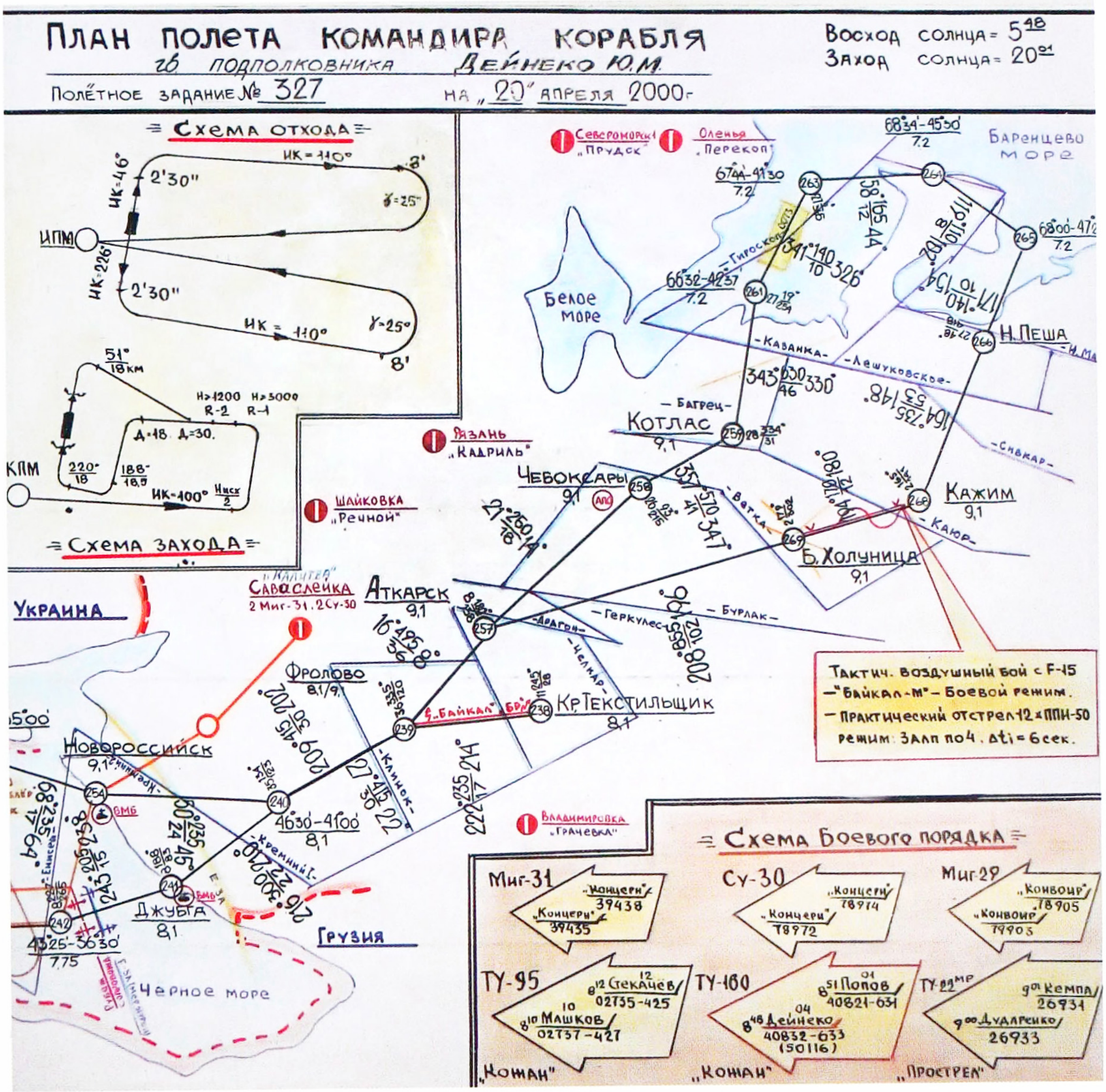
The latest Tu-160 to be named, '17 Red' *Valeriy Chkalov*.


17
ВАЛЕРИЙ
ЧКАЛОВ
17

On 18th-21st April 2000 a further series of exercises was held by the 37th Air Army to wrap up the Winter period of training for 1999-2000. Within the framework of these exercises, conducted in the Middle and Lower Volga regions (near the Volga River) and also over the Caspian and Black Seas, a number of tasks were carried out which had never been conducted in these areas before. The principal objective of the exercise was to test the combat readiness of the aircraft and equipment which had sat idle for a considerable period (particularly the aircraft recovered from the Ukraine), as well as to polish the combat skills of the participants. According to the senior officer in charge of the exercise, Air Maj.-Gen. Vladimir Mokhov, it was planned to examine the problems of command and control of aircrews from ground command posts, as well as using Ilyushin/Beriyev A-50 *Mainstay* AWACS aircraft to direct fighters onto notional targets. The scenario also involved joint operations by the Long-Range Aviation and Tactical Aviation to disrupt the notional enemy's air defence system, using active ECM. The bombers recently acquired from the Ukraine took part in this exercise; both Tu-160s and Tu-95MSs carried out launches of Kh-55SM cruise missiles, while the Tu-22M3s assigned to the exercise performed conventional bombing missions.

ВАСИЛИЙ
РЕШЕТНИКОВ
02

Interestingly, even before the exercise began, Turkey had registered its opposition by placing its Navy on alert in the Black Sea. On the one hand, this complicated matters, but there was also a positive side to it. This provided a more realistic scenario for the maritime reconnaissance sorties conducted by the Tu-22MR, Russia's latest and most modern


План полета командира корабля
гв. подполковника Дейнеко Ю.М.
Полётное задание № 327
на „20" апреля 2000г.
Восход солнца = 5⁴⁸
Заход солнца = 20⁰¹
Схема отхода
Схема захода
ИПМ
КПМ
Белое море
Баренцево море
Украина
Грузия
Черное море
Котлас
Чебоксары
Аткарск
Фролово
Новороссийск
Джубга
Кр.Текстильщик
Н.Пеша
Кажим
Б.Холуница
Саваслейка
Североморск-1 „Прудск"
Оленья „Перекоп"
Рязань „Кадриль"
Шайковка „Речной"
Владимировка „Грачевка"
Тактич. воздушный бой с F-15
– „Байкал-М" – боевой режим.
– Практический отстрел 12 × ППИ-50
режим: залп по 4. Δti = 6сек.
Схема боевого порядка
МиГ-31
„Концерн" 39438
„Концерн" 39435
Су-30
„Концерн" 78914
„Концерн" 78972
МиГ-29
„Конвоир" 18905
„Конвоир" 19903
ТУ-95
8¹² Стекачёв 02735-425
8¹⁰ Машков 02737-427
„Кожан"
ТУ-160
8⁵¹ Попов 40821-631
8⁴⁸ Дейнеко 40832-633 (50116)
„Кожан"
ТУ-22МР
9⁰¹ Кемпа 26931
9⁰⁰ Дударенко 26933
„Прострел"

ИВАН ЯРЫГИН

Opposite page: Maintenance in progress on Tu-160 '07 Red'.

Tu-160 '02 Red' *Vasiliy Reshetnikov* and Tu-95MS '15 Red' *Kaluga* share a sunlit hardstand at Engels.

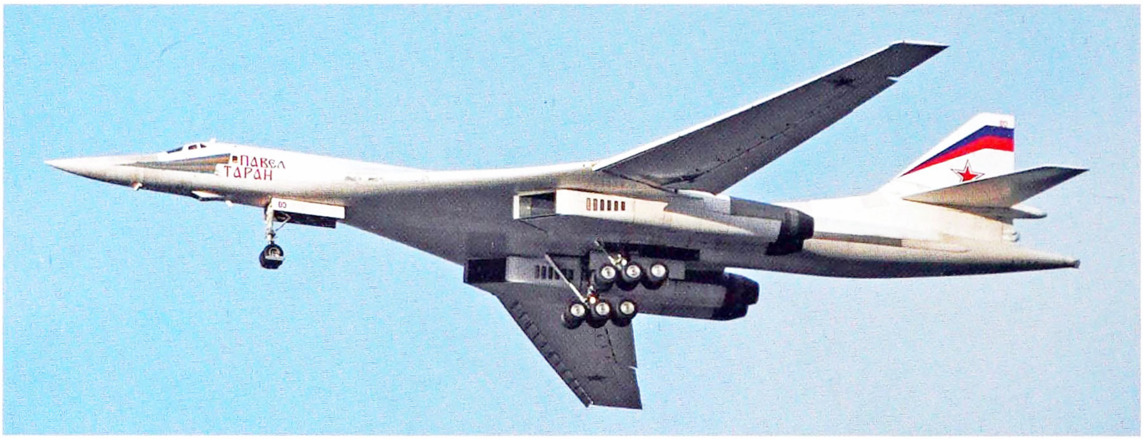
22nd GvTBAD CO Maj.-Gen. Anatoliy Zhikharev, DA Commander Igor' Khvorov, Minister of Defence Sergey Ivanov and 22nd GvTBAD Chief Navigator Col. S. A. Trofimov (left to right) before a flight in a Tu-160 in August 2003.

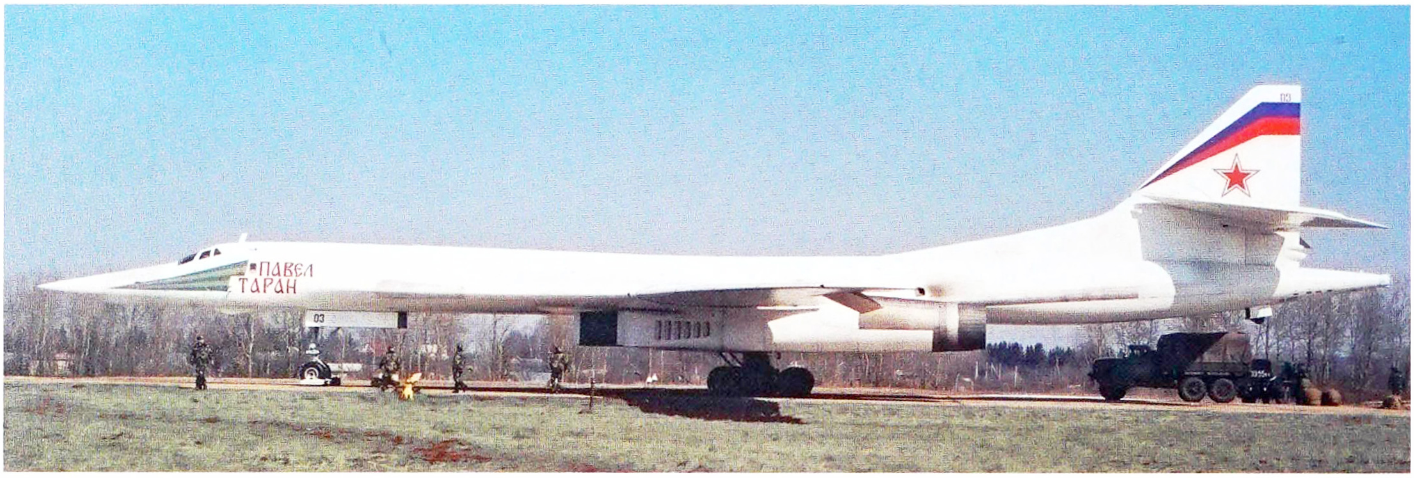
This page: A map (flight plan) of a sortie flown by 121st GvTBAP CO Lt.-Col. Yuriy M. Deyneko on 20th April 2000.

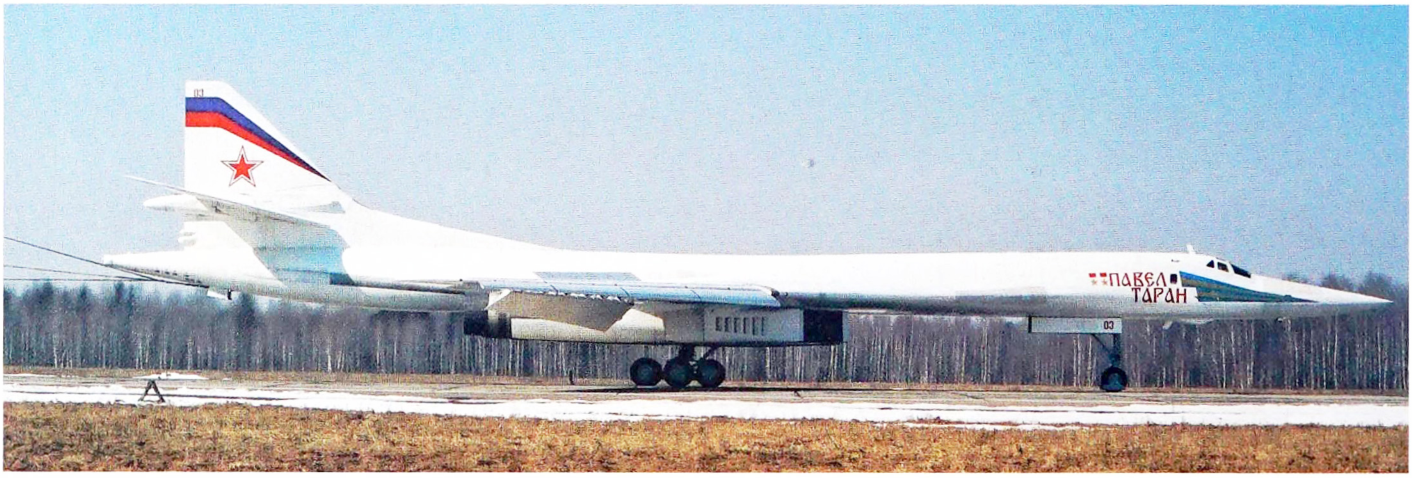
Tu-160 '04 Red' *Ivan Yarygin* uses its brake 'chutes.

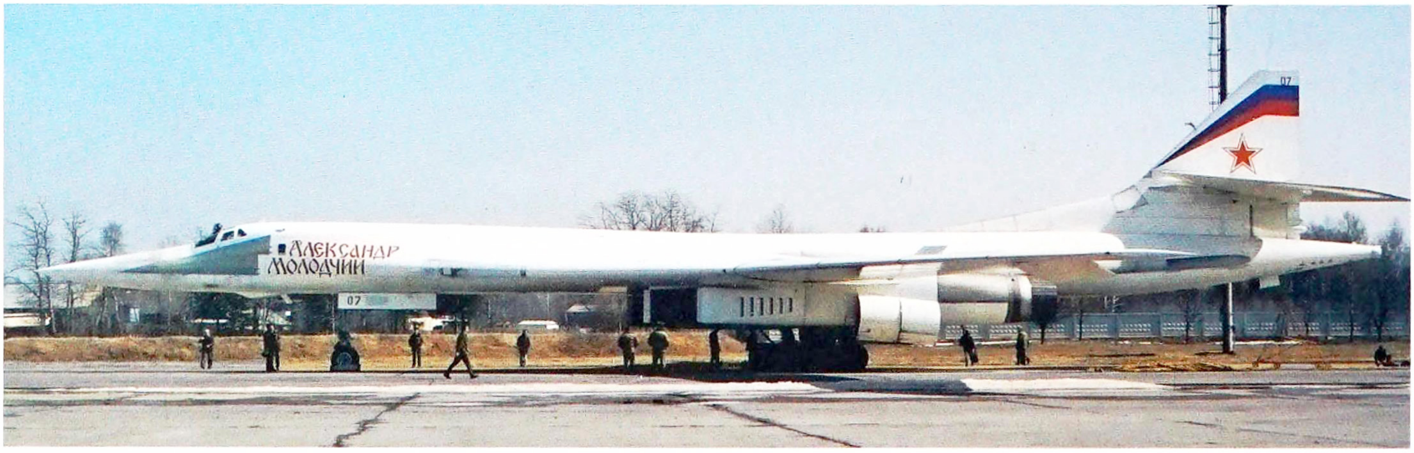
Tu-160 '03 Red' *Pavel Taran* in flight, on the hardstand and at the end of its landing run (note the open brake parachute doors).

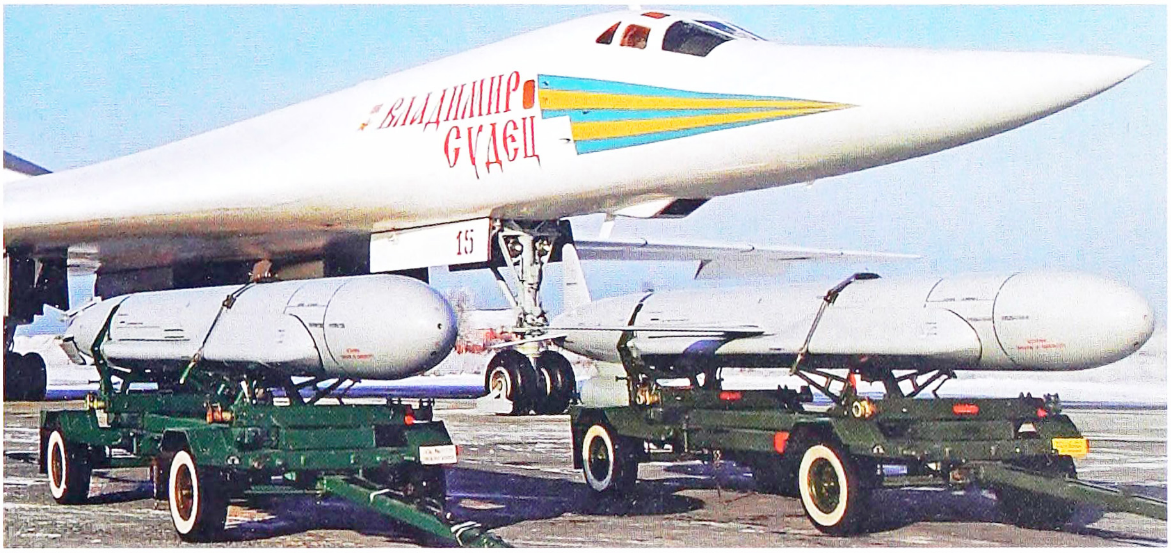
Tu-160 '07 Red' *Aleksandr Molodchiy* with the engines uncowled for inspection.


ПАВЕЛ ТАРАН


ПАВЕЛ ТАРАН
03


ПАВЕЛ ТАРАН
03

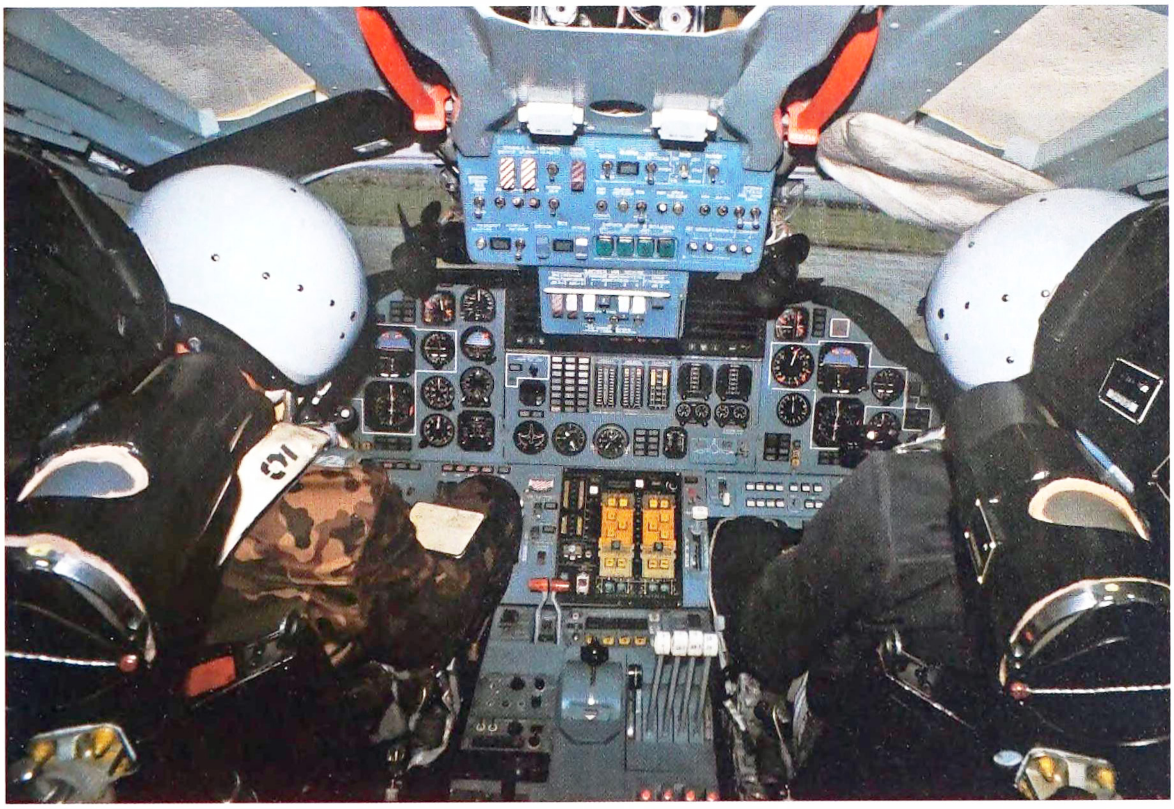

АЛЕКСАНДР МОЛОДЧИЙ
07



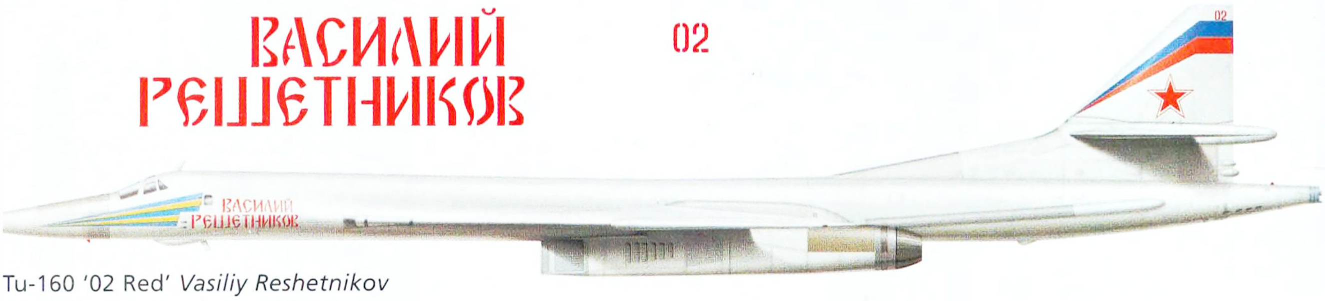
Kh-55SM missiles in pre-launch and cruise configuration arrayed in front of Tu-160 '15 Red' *Vladimir Soodets*.

The captain of Tu-160 '01 Red' *Mikhail Gromov* in his seat.

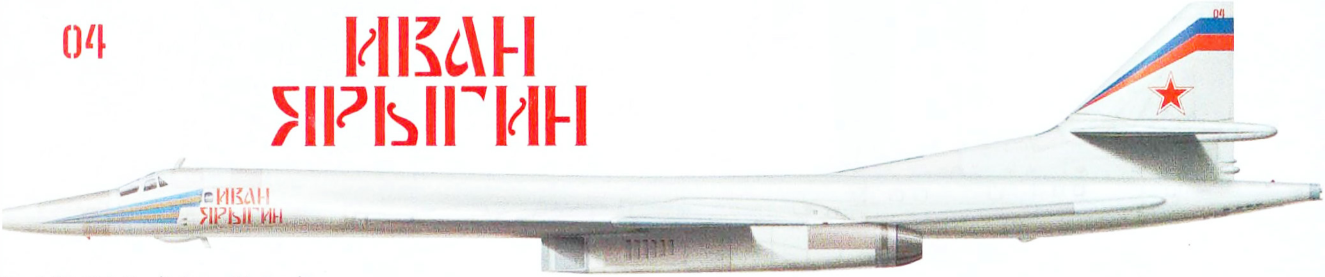
An APA-100 provides ground power for '07 Red' during ground checks.



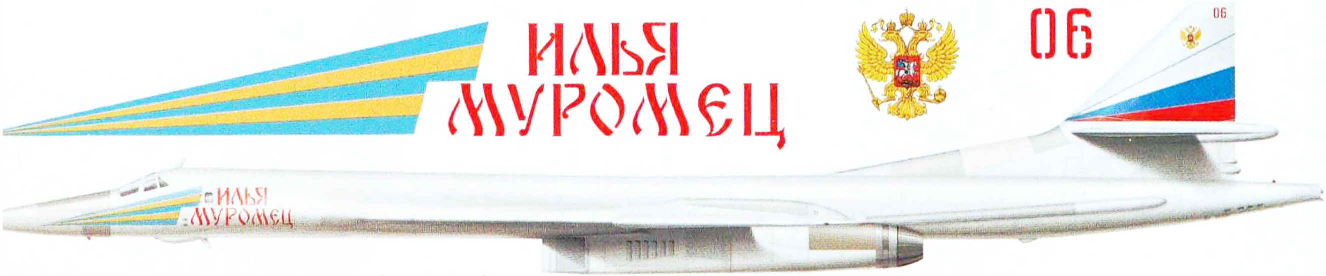
The pilots of '01 Red' go through the engine starting procedure, No. 2 engine first.


ВАСИЛИЙ
РЕШЕТНИКОВ
02

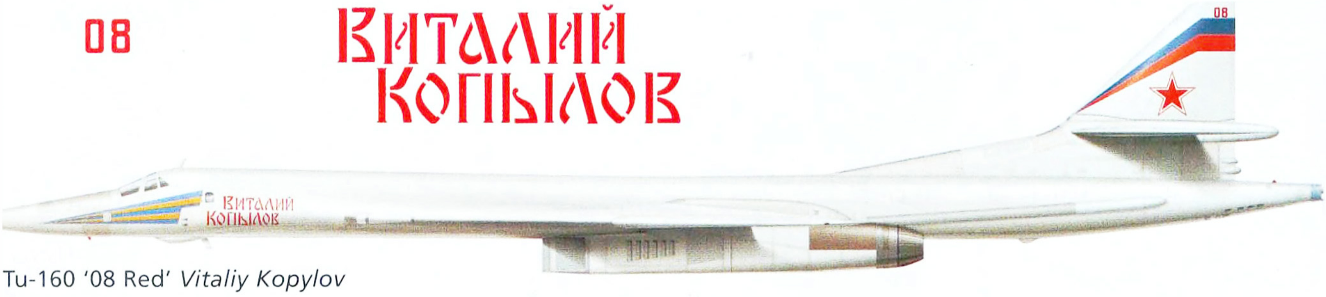
Tu-160 '02 Red' *Vasiliy Reshetnikov*


04
ИВАН
ЯРЫГИН

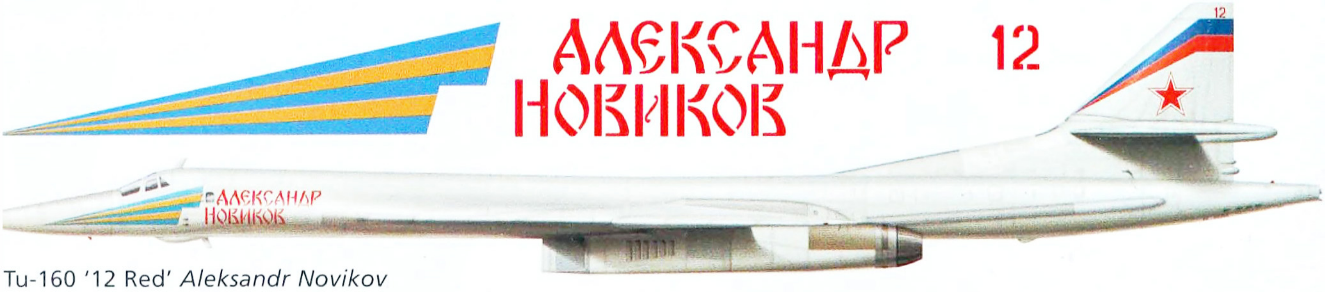
Tu-160 '04 Red' *Ivan Yarygin*


ИЛЬЯ
МУРОМЕЦ
06

Tu-160 '06 Red' *Il'ya Muromets* – the aircraft which still bears this name


08
ВИТАЛИЙ
КОПЫЛОВ

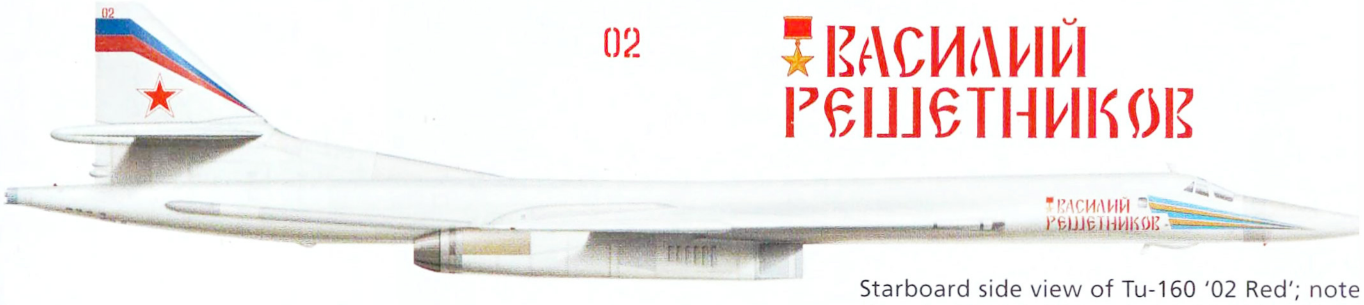
Tu-160 '08 Red' *Vitaliy Kopylov*


АЛЕКСАНДР
НОВИКОВ
12

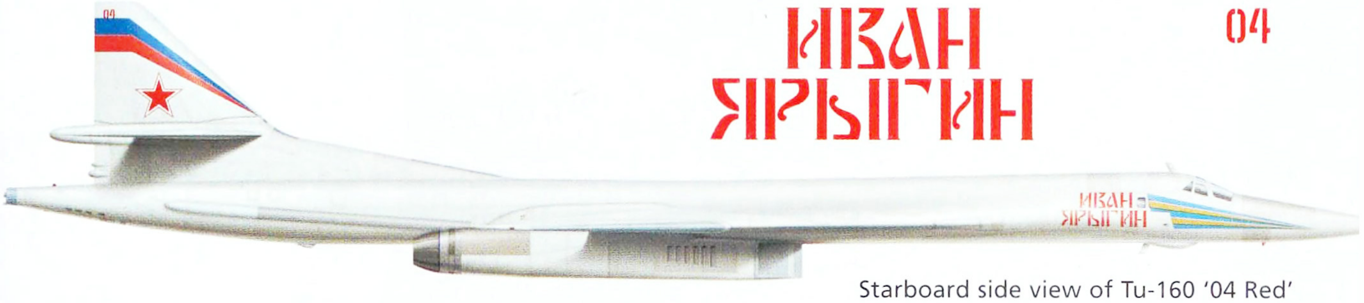
Tu-160 '12 Red' *Aleksandr Novikov*

long-range reconnaissance platform. As already noted, the Tu-22MR had previously performed similar tasks a few months earlier over the Sea of Japan; for the April exercises they were redeployed from the Far East to European Russia to continue their operational work-up.

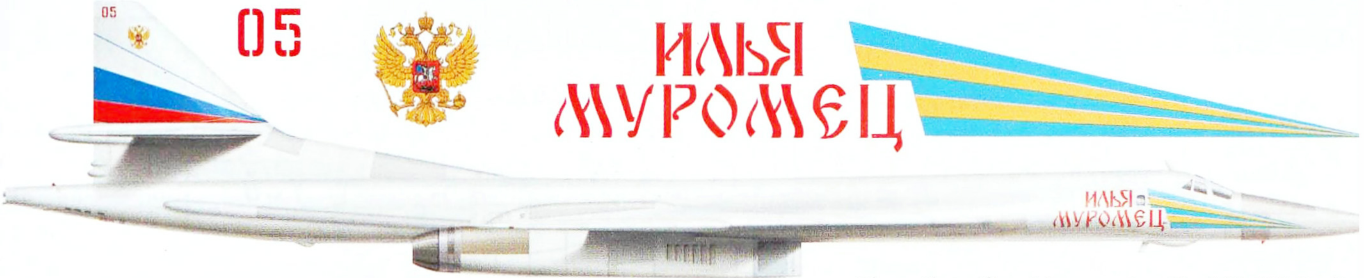
During the Summer of 2000, combat training for DA crews continued, with the participation of personnel from the Siberian and Far


02
ВАСИЛИЙ
РЕШЕТНИКОВ

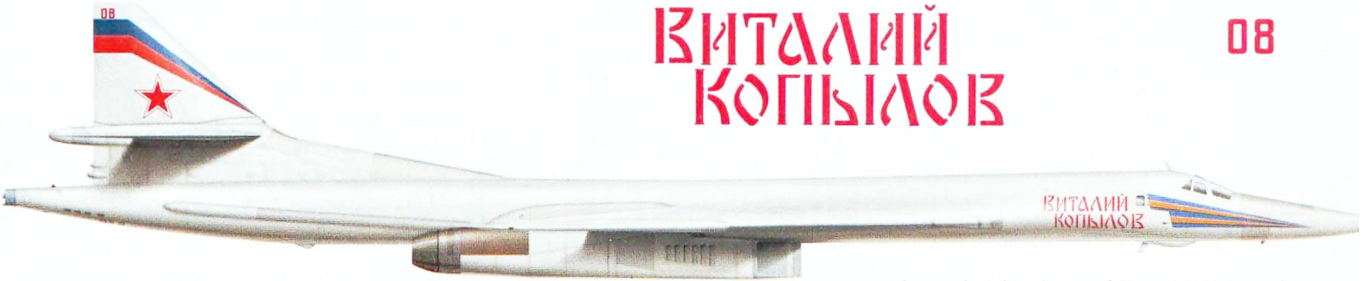
Starboard side view of Tu-160 '02 Red'; note that the HSU Gold Star is on this side only


ИВАН
ЯРЫГИН
04

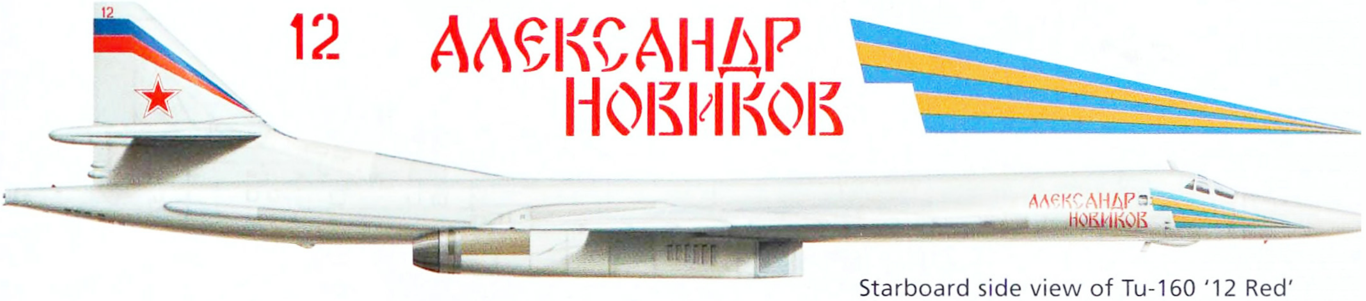
Starboard side view of Tu-160 '04 Red'


05
ИЛЬЯ
МУРОМЕЦ

The other *Il'ya Muromets* – Tu-160 '05 Red' which is now named *Aleksandr Golovanov*


ВИТАЛИЙ
КОПЫЛОВ
08

Starboard side view of Tu-160 '08 Red'


12
АЛЕКСАНДР
НОВИКОВ

Starboard side view of Tu-160 '12 Red'

Eastern Military Districts in a further command post exercise. Tu-160, Tu-95MS and Tu-23M3 aircraft operating out of Engels and Shaikovka carried out long-range flights of more than ten hours' duration, involving the launch of long-range ALCMs at ground targets on northern and southern practice ranges. All the missiles destroyed their designated targets and the crews demonstrated a high level of training and combat proficiency, achieving 'excellent'

Afternoon scene at the 184th TBAP flight line in Engels, with Tu-95MS '10 Red' *Saratov* nearest.

79th TBAP personnel welcome an aircraft coming home after an exercise.

scores for the targets destroyed. In addition to this, during this exercise, for the first time since 1994 two pairs of Russian bombers operated from airfields in the Republic of Belarus, thus demonstrating the close defence union between the two nations. A pair of Tu-95MSs landed and later took off from Machoolishchi AFB near Minsk, while a pair of Tu-22M3s paid a similar visit to the former Soviet-era DA base at Baranovichi. The exercises conducted in the course of 1999-2002, which involved Long-Range Aviation crews in flights to Alaska and over the Sea of Japan and the Black Sea, made a very strong impression on NATO commanders. During that period the regiments of Long-Range Aviation successfully carried out ten live launches of ALCMs on average every year.

In 2001 Russian strategic missile carriers put in an appearance over the North Pole – for the first time after a ten-year break. Russia's *potential friends* (as some people in the Air Force were apt to put it) suddenly found that

the all-but-forgotten missions 'around the corner' (around the Kola Peninsula and out over the Atlantic Ocean) and reconnaissance overflights of NATO carrier task forces by Russian strategic aircraft had resumed. Command/staff exercises involving temporary deployments to other bases, including those in the Republic of Belarus, were now conducted on a regular basis. Regaining their Soviet-era skills, Tu-160 crews brushed up on in-flight refuelling techniques. The exercises further intensified in 2002, missile launches being undertaken with all three aircraft types operated by the DA. That year the 121st TBAP mastered IFR techniques, the crews captained by Zhikharev, Bobrov and Medvedev being the first to receive their ratings.

The year 2003 began with a series of inspections by the Russian Ministry of Defence's Military Inspection to check the operational readiness of the 37th Air Army's command, the 22nd TBAD and, in particular, the 840th and 52nd TBAPs. Four practice missile launches and bombing attacks were made in the process, the crews earning excellent grades.

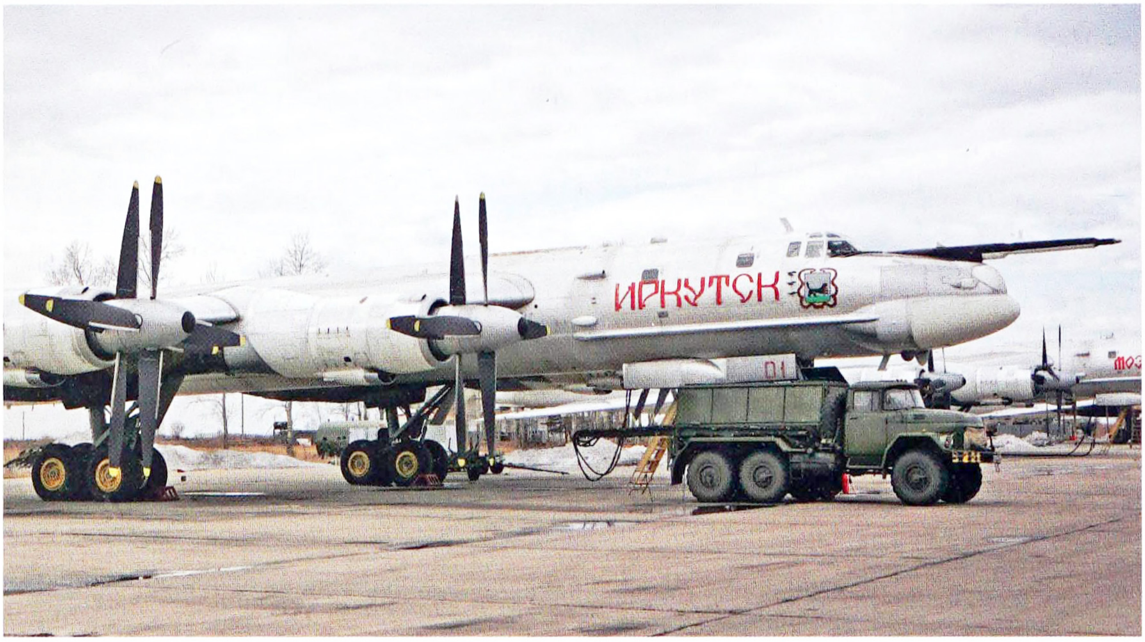
That year Tu-160 and Tu-95MS strategic missile carriers, for the first time in Russia's modern history, performed an ultra-long-range flight and simulated launches of cruise missiles in the Indian Ocean. The exercises were held in two stages in Russia's airspace and in the strategically important sea areas of the Arctic Ocean and the Pacific. In the course of Exercise *Zapad-2003* held between 11th and 16th May, for the first time in the post-Soviet period, Tu-16, Tu-95MS and Tu-22M3 missile carriers of the DA took off almost simultaneously from several airfields and set off to carry out the assigned combat training tasks in different areas, including those far beyond the Russian borders. After a flight of many hours' duration along the designated routes the bombers performed real and simulated launches of ALCMs and dropped their bomb loads on target ranges in northern and southern Russia.

More than 30 Long-Range Aviation aircraft were involved in the exercise, and its key episode, in the light of the war in Iraq, had a clearly anti-Western flavour. In the Indian Ocean area Tu-95MSs carried out the launch of two Kh-55SM ALCMs against a 'maritime target', and Tu-160s performed a simulated launch of Kh-55SMs against the US Navy base on Diego Garcia atoll from a distance of 2,500 km (1,554 miles). In the Pacific Ocean, four Tu-22M3s (two Russian Air Force aircraft and two Russian Navy/Pacific Fleet examples) evidently conducted training in dealing a strike against a carrier group.

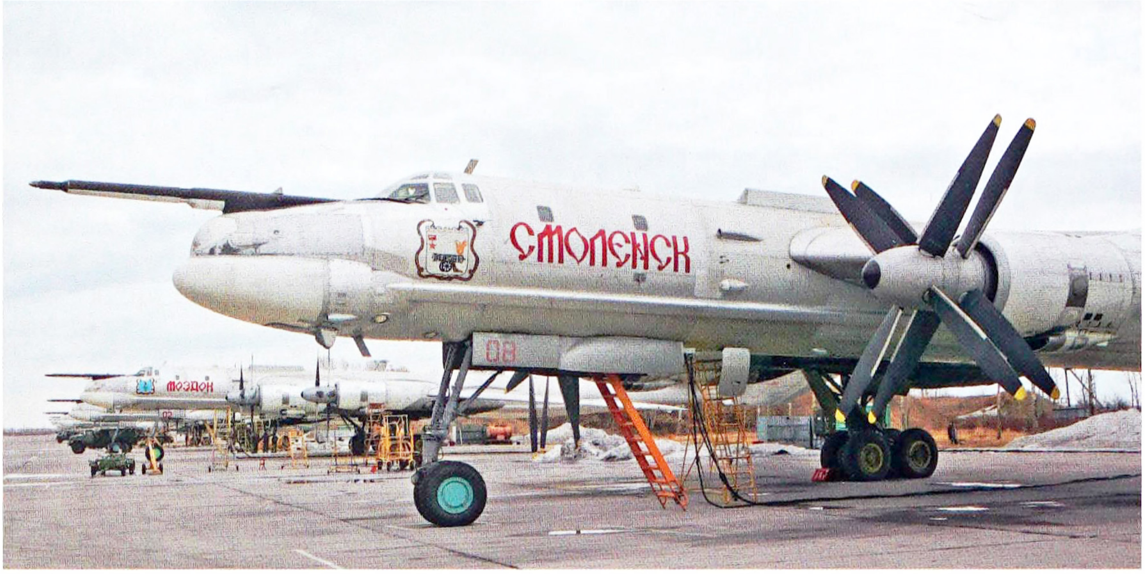
In August 2003 a pair of Tu-160 strategic missile carriers seconded from the Air Force took part in the large-scale command/staff exercise *Vostok-2003* (East-2003) conducted by the Pacific Fleet. In accordance with the exercise scenario, a pair of Tu-160s escorted by Su-27 fighters headed for a distant oceanic

The control tower at Ookraïnka AB. Note the airfield's holding pattern marked on the radarscopes.

182nd GvTBAP Tu-95MSs under threatening skies at Ookraïnka AB.

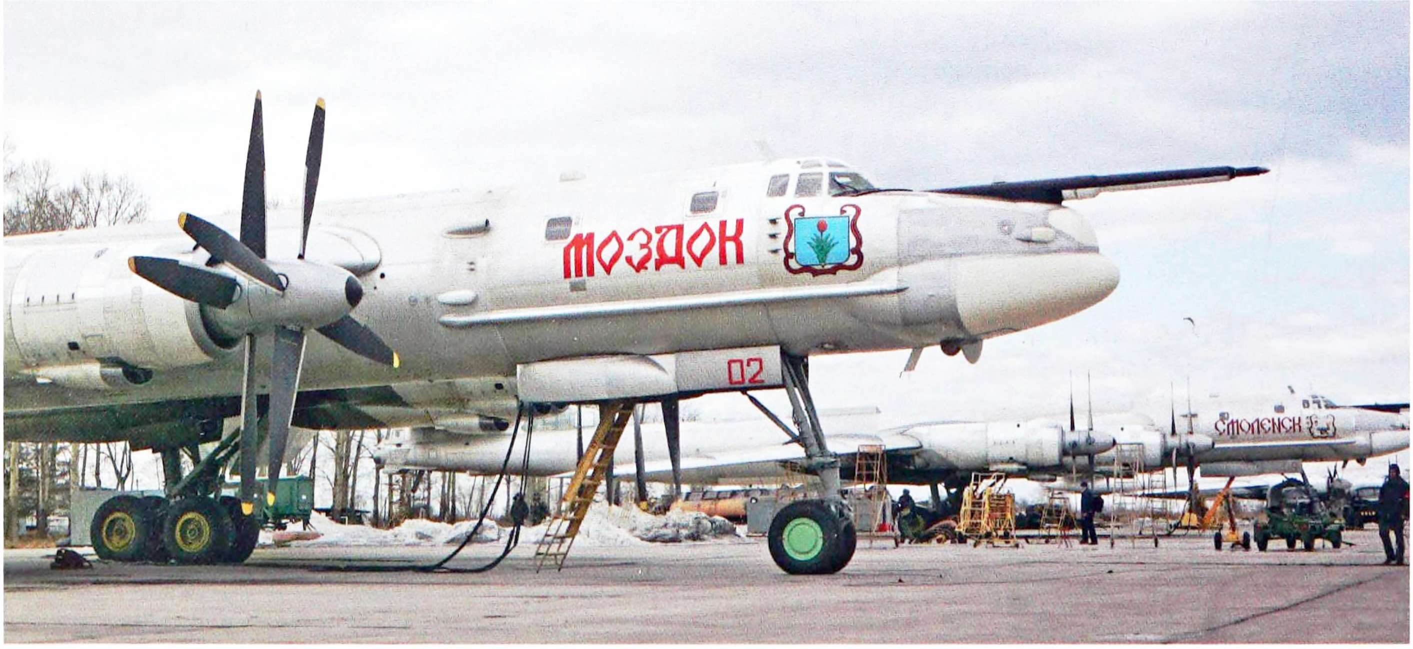


A 182nd GvTBAP Tu-95MS, '01 Red' *Irkutsk*, is readied for flight; power is supplied by an APA-80 GPU on a ZiL-131N chassis.



The 182nd GvTBAP flight line with Tu-95MS '08 Red' *Smolensk* nearest.

Another 182nd GvTBAP *Bear-H* to have a name, '02 Red' *Mozdok*. The city crests on all three aircraft are entwined with a black/orange ribbon to indicate the unit's Guards status.



Soon afterwards, Tu-95MS '01 Red' departs on a training mission.

area several thousand kilometres from the coasts of Russia. There, acting on information provided by surveillance satellites, they detected and identified a notional enemy surface target and effected its simulated destruction.

In 2003, a Tu-160 flown by a 121st TBAP crew crashed in a post-repair check flight, killing all on board. The cause of the crash was established, whereupon modifications to the fuel system were carried out on the remaining *Blackjack* fleet.

A series of high-level exercises was also held in 2004 – the year when the DA celebrated its 90th anniversary. In February the Russian MoD's Military Inspection checked on the operational readiness of the 326th TBAD; this involved large-scale flight operations and dispersal of aircraft to different bases. During

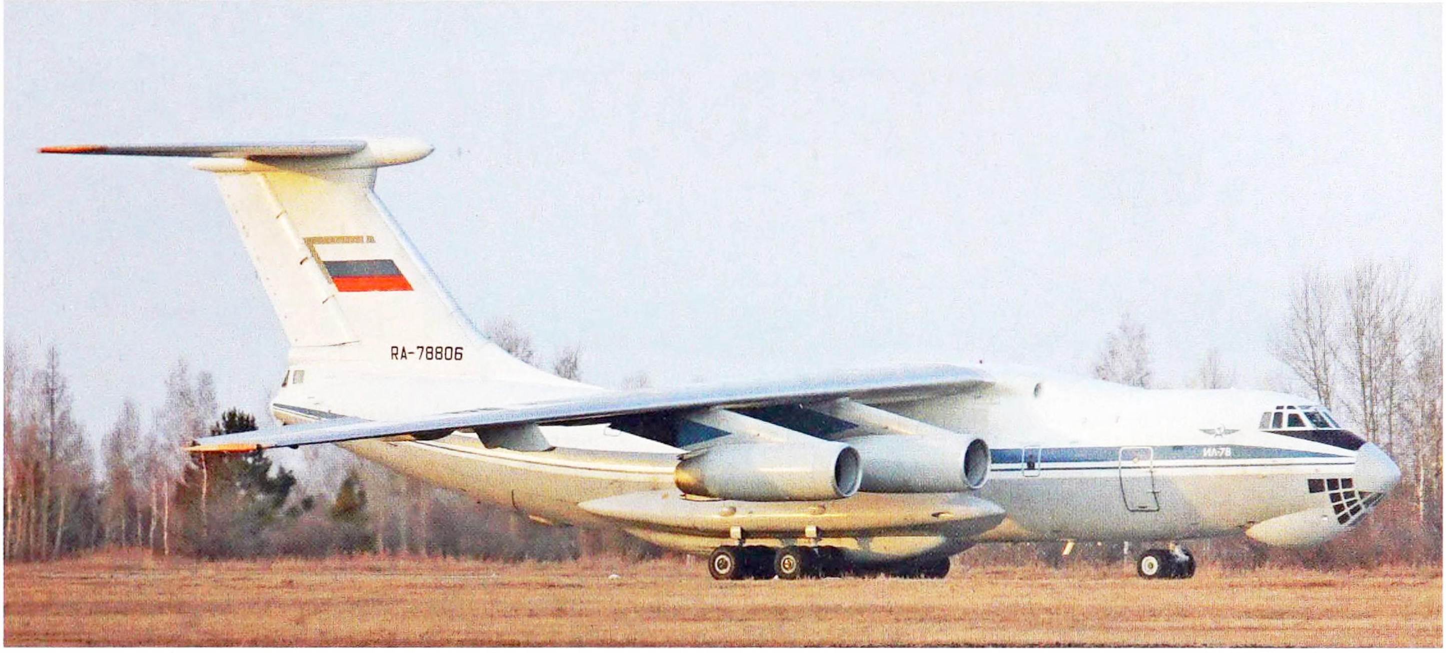
Another 182nd GvTBAP Tu-95MS, '05 Red', becomes airborne.

'43 Red', a 79th TBAP Tu-95MS, is refuelled by a TZ-22 at Ookraïnka.

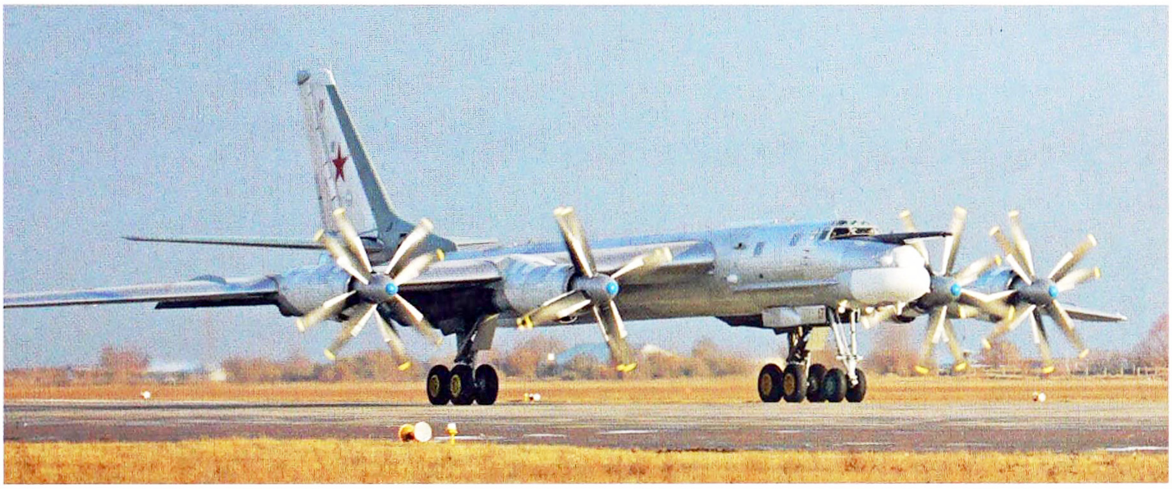
Opposite page, bottom: a 184th TBAP Tu-95MS ('12 Red' *Moskva*) takes off during an exercise.

a strategic command/staff exercise in February 2004, the crews of Tu-160 and Tu-95MS strategic missile carriers made nearly 20 sorties; during two days of the exercise alone the crews of these aircraft logged a total of some 130-140 hours. In particular, the crews of two Tu-95MS missile carriers operating out of Engels-2 AB carried out live launches of Kh-55SM ALCMs and successfully hit the notional targets at one of Russia's northern weapon ranges in the area of the Novaya Zemlya archipelago. The flight of the two *Bear-Hs* from Engels to the Barents Sea area and back lasted more than nine hours and

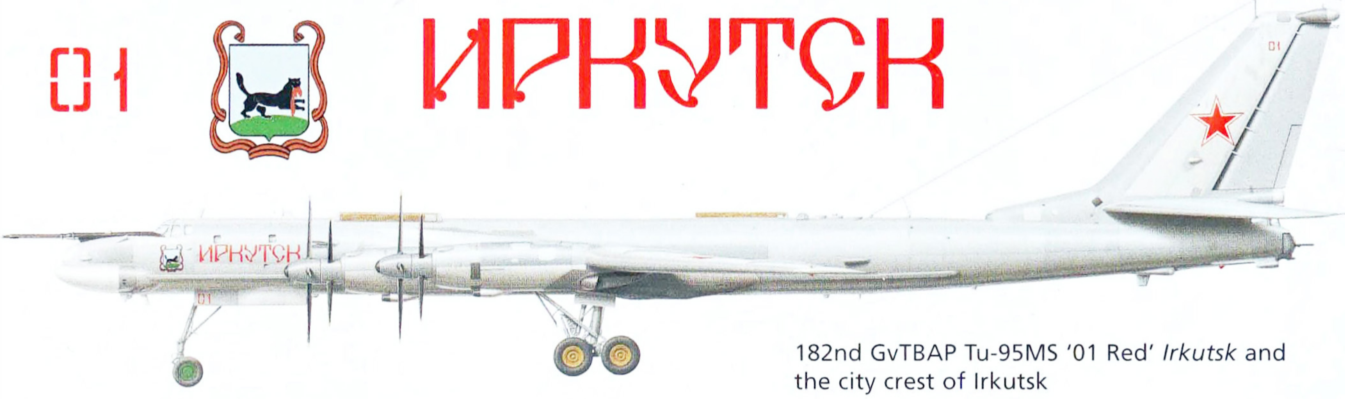
79th TBAP *Bear-H* '59 Red' *Blagoveshchensk* about to land at Ookraïnka.



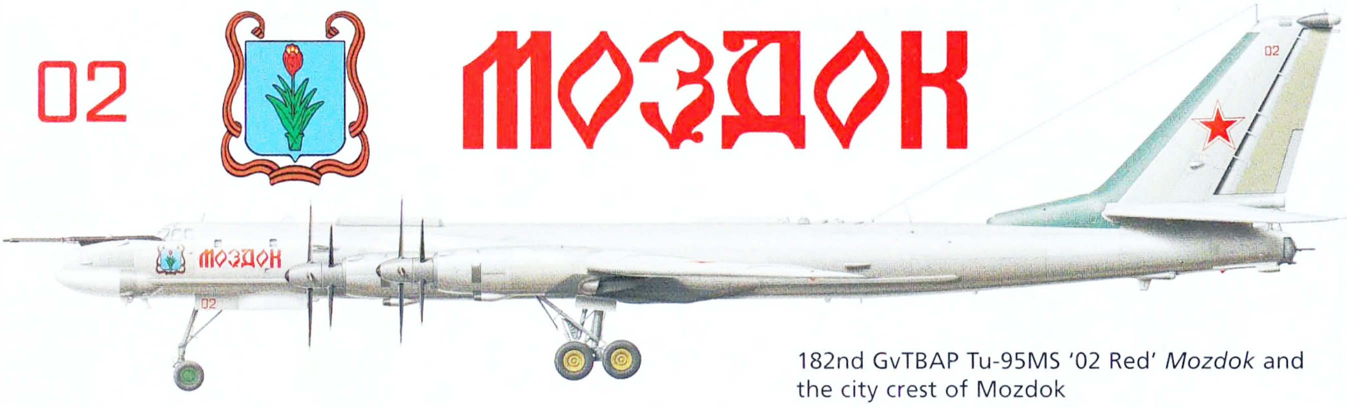
IL-78 RA-78806, one of the Russian Air Force's few quasi-civil *Midases*. Note that the outer UPAZ-1 hose drum units have been removed.



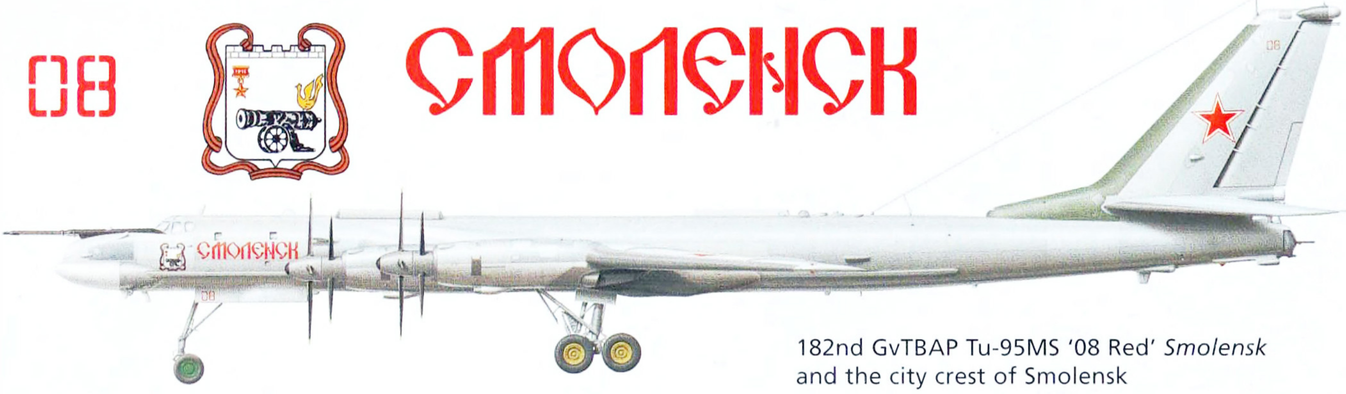
Another 184th TBAP Tu-95MS involved in the exercise ('17 Red').



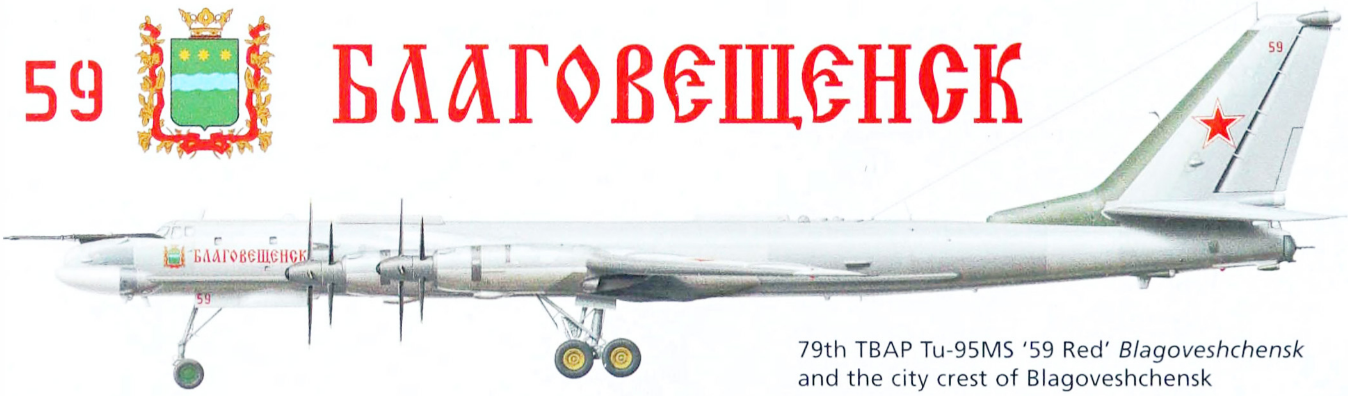
182nd GvTBAP Tu-95MS '01 Red' *Irkutsk* and the city crest of Irkutsk



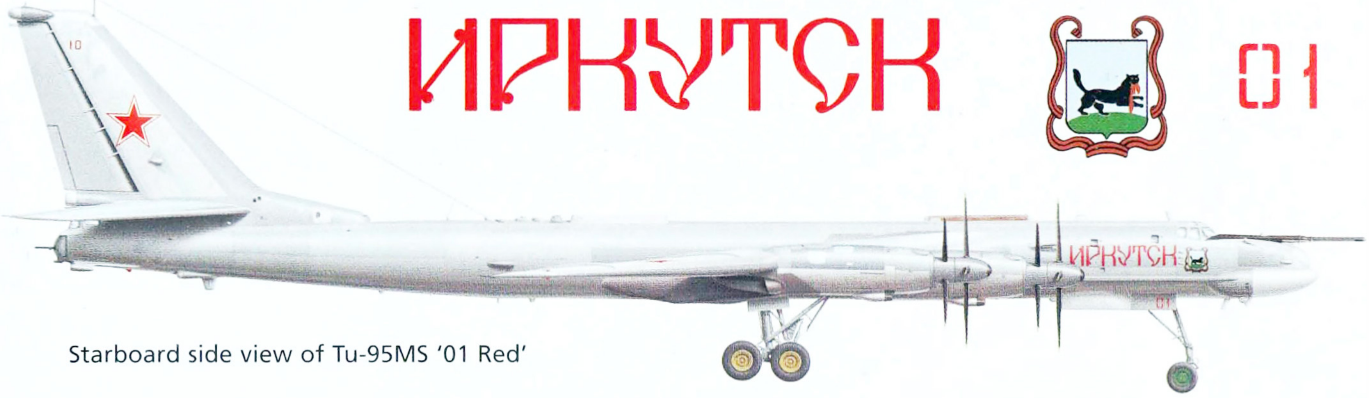
182nd GvTBAP Tu-95MS '02 Red' *Mozdok* and the city crest of Mozdok


08
СМОЛЕНСК

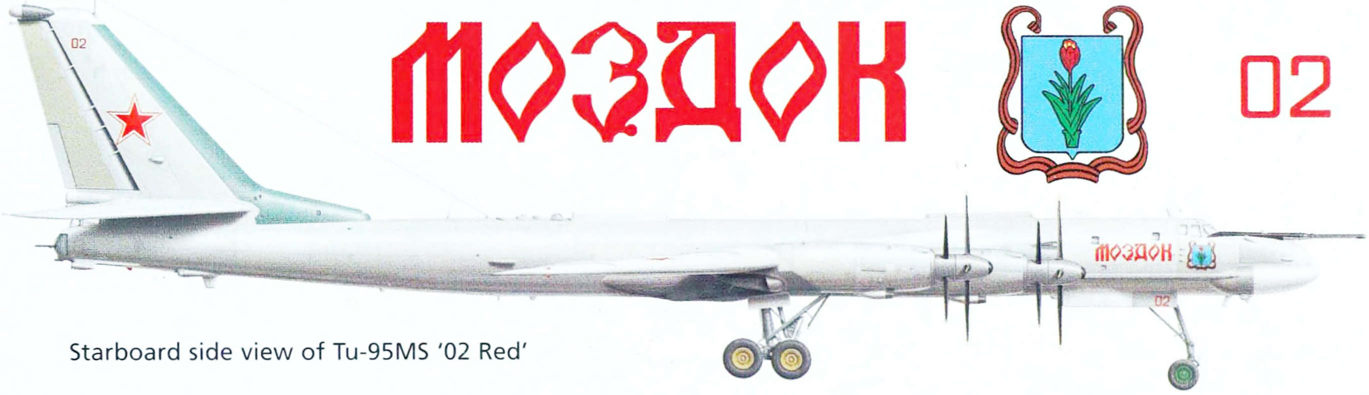
182nd GvTBAP Tu-95MS '08 Red' *Smolensk* and the city crest of Smolensk


59
БЛАГОВЕЩЕНСК

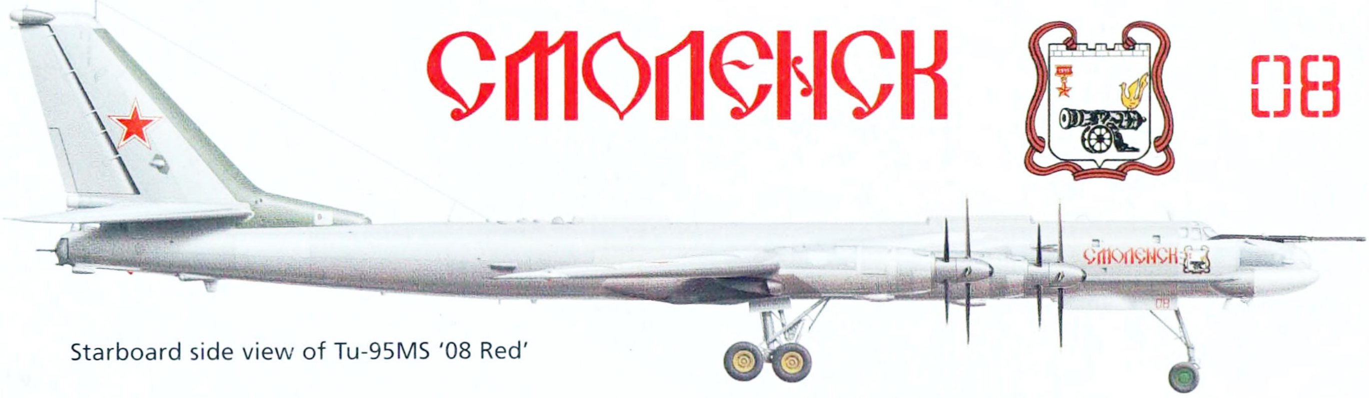
79th TBAP Tu-95MS '59 Red' *Blagoveshchensk* and the city crest of Blagoveshchensk



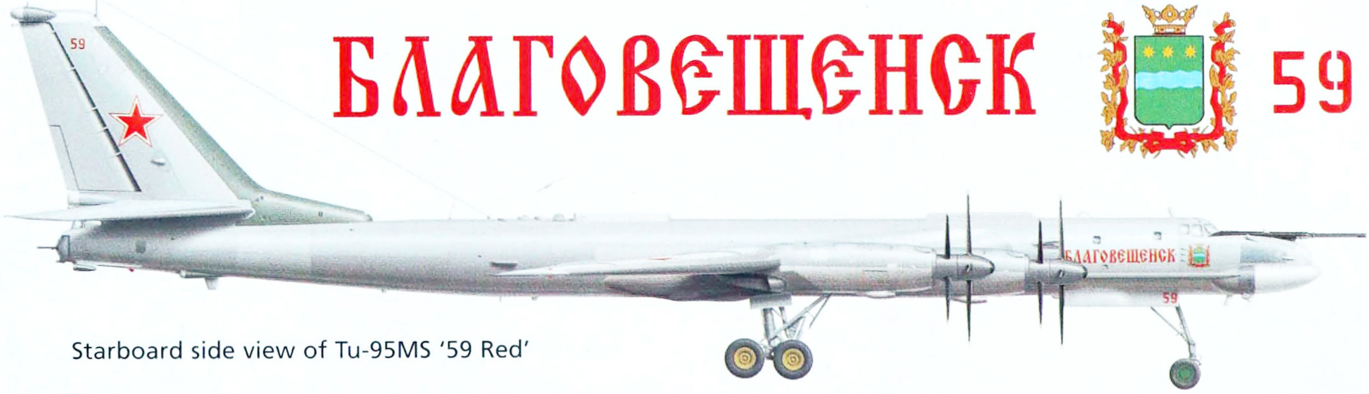
Starboard side view of Tu-95MS '01 Red'



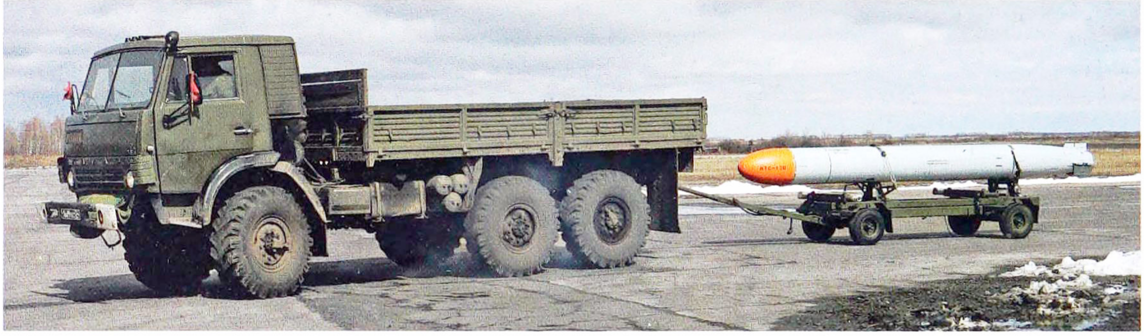
Starboard side view of Tu-95MS '02 Red'


СМОЛЕНСК
08

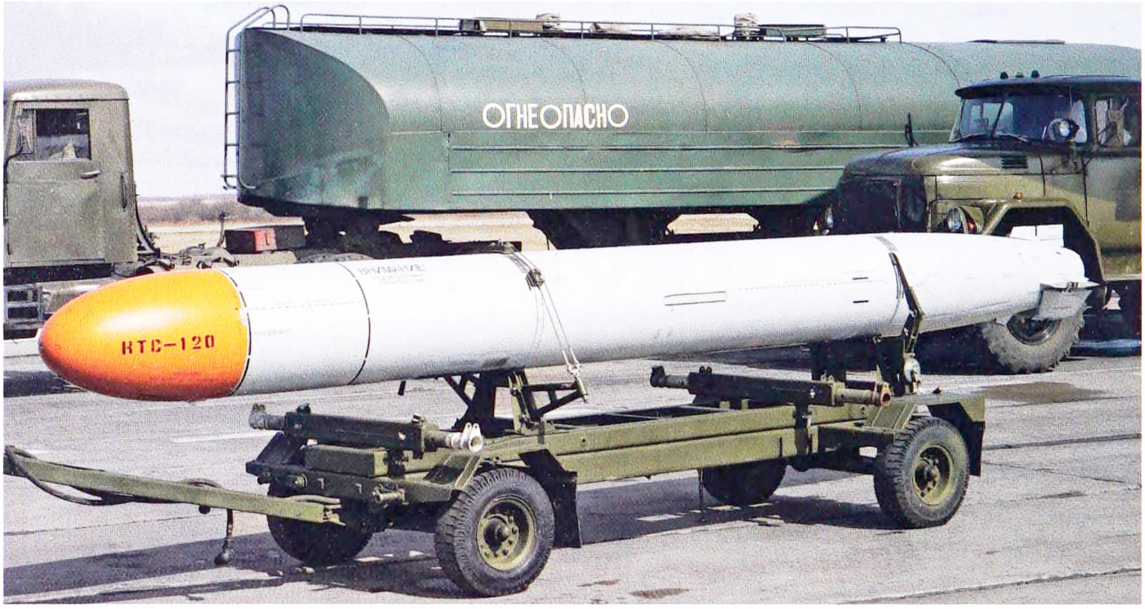
Starboard side view of Tu-95MS '08 Red'


БЛАГОВЕЩЕНСК
59

Starboard side view of Tu-95MS '59 Red'



A KamAZ-43101 army lorry tows a dolly with a Kh-55 cruise missile at Ookraïnka.


ОГНЕОПАСНО
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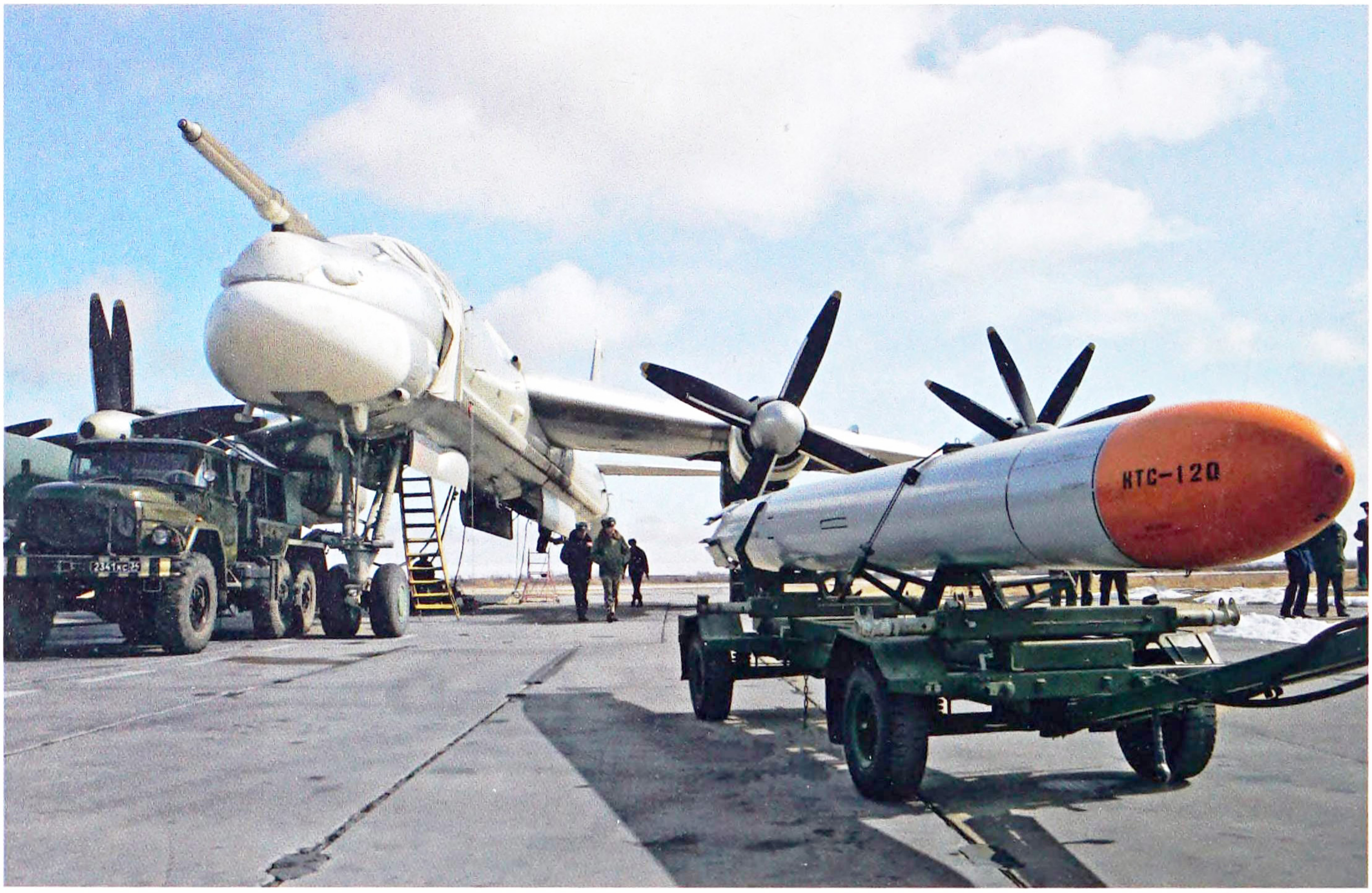
Close-up of the missile and its dolly.



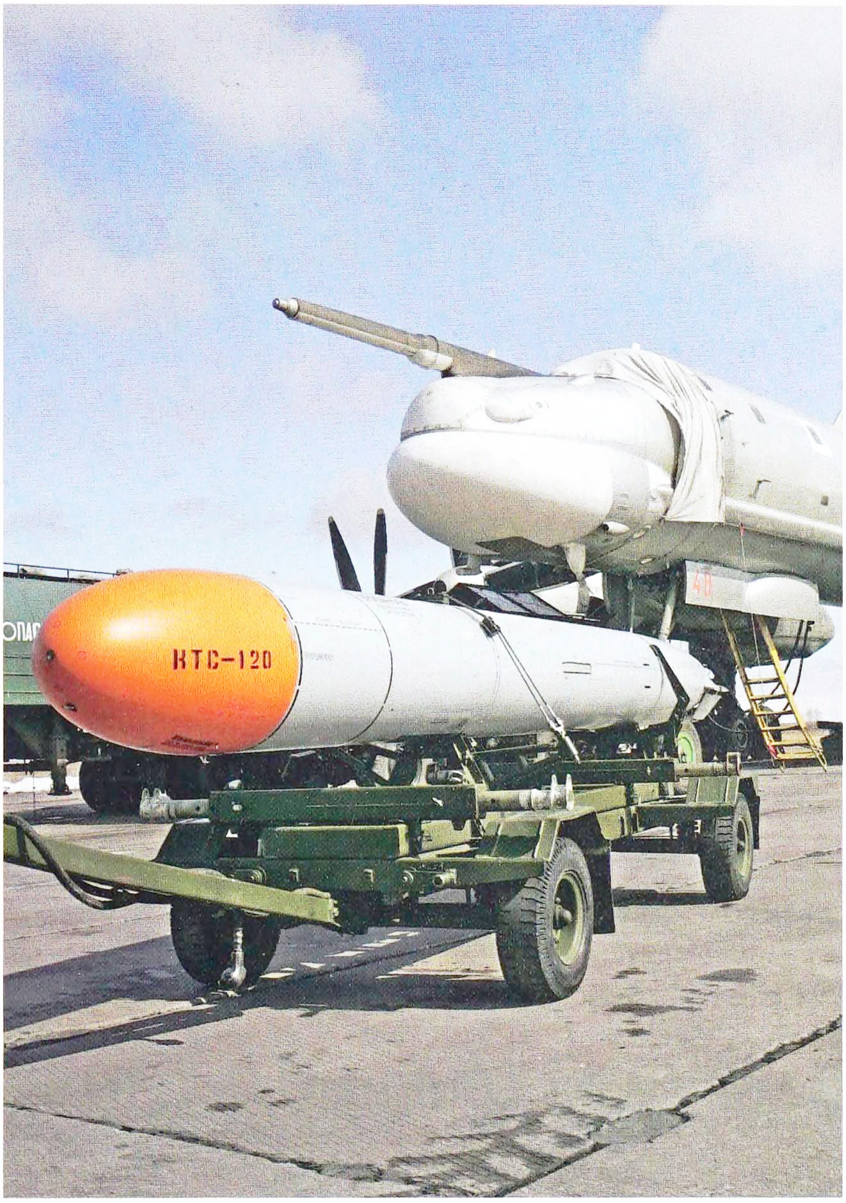
In a few minutes the missile will be loaded into 79th TBAP Tu-95MS '48 Red'.

A Kh-55 begins its descent to cruise altitude, leaving a smoky trail.

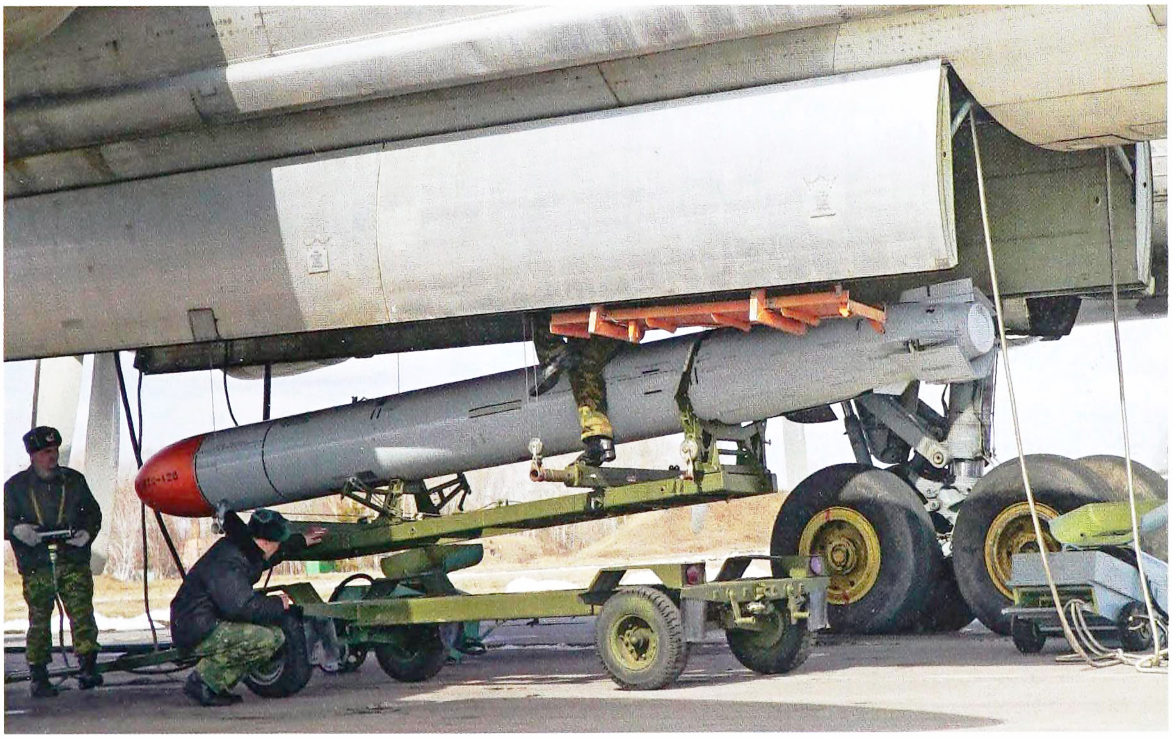
proceeded under adverse weather conditions. Despite this, the crews accomplished the mission fully.

Russian Air Force Tu-22M3 and Tu-95MS bombers, supported by IL-78M tankers, were also involved in the joint Russian-Chinese exercise *Peace Mission-2005* held on Russian soil.

In April 2006, a command/staff exercise and operational readiness check of the 326th TBAD decorated with the Kutuzov Order (2nd Degree) was successfully held in the Russian Far East and Siberia; the division was commanded by Maj.-Gen. Aleksandr Afinogentov. Lt.-Gen. Igor' Khvorov, the Commander of the 37th (Strategic) Air Army, was in control of the exercise. During the exercise the preparation and conduct of operations by an air division using conventional weapons was practiced. In other words, personnel training, co-ordination



Another view of the Kh-55 at Ookraïnka. In the background the *Bear* is refuelled for the mission.



The missile is hoisted into the weapons bay, using the dolly's detachable upper section. Note the work platform suspended from the bay door.

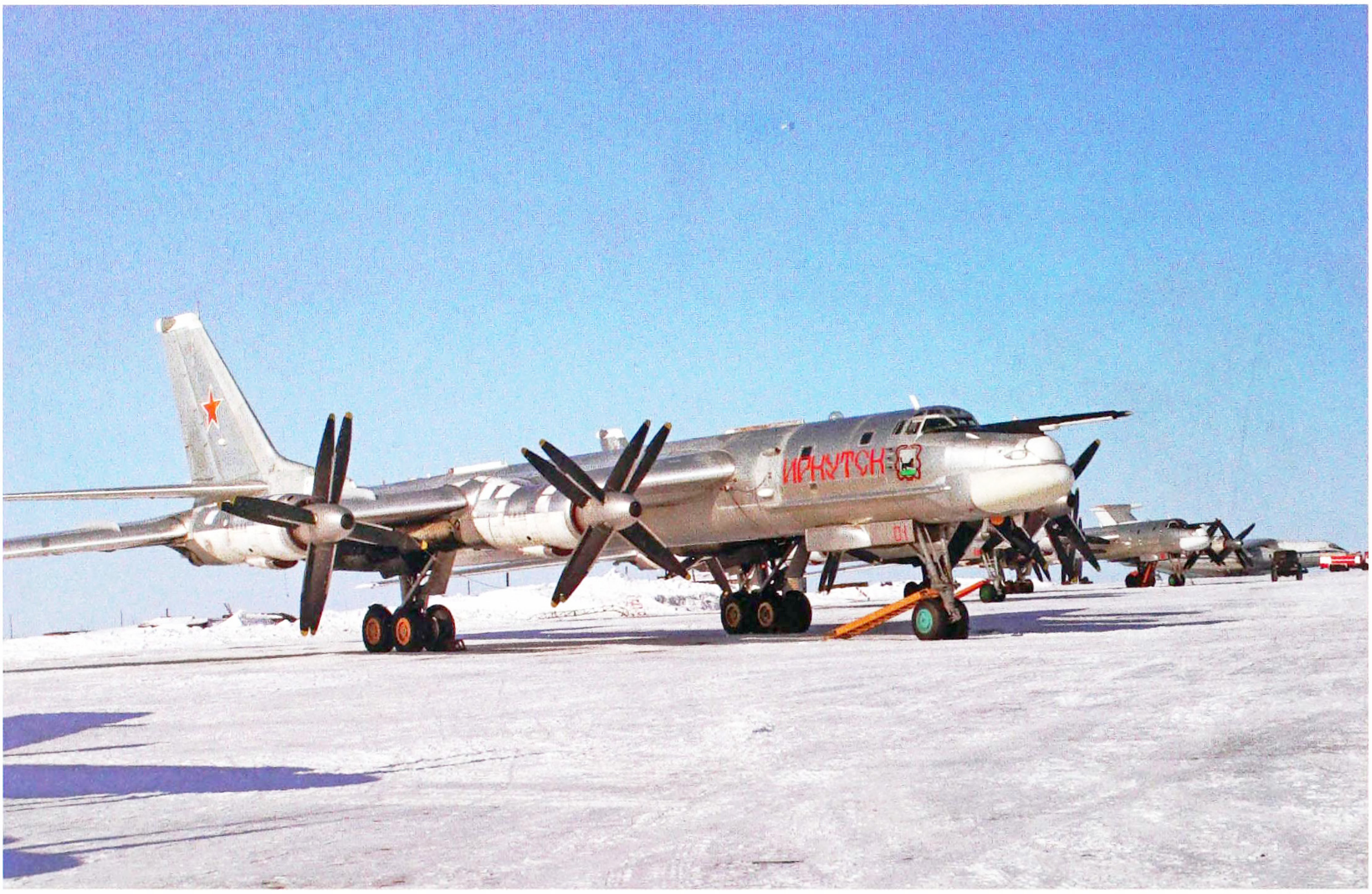
The snow-covered hills of the Russian Far East seen from a *Bear-H*.

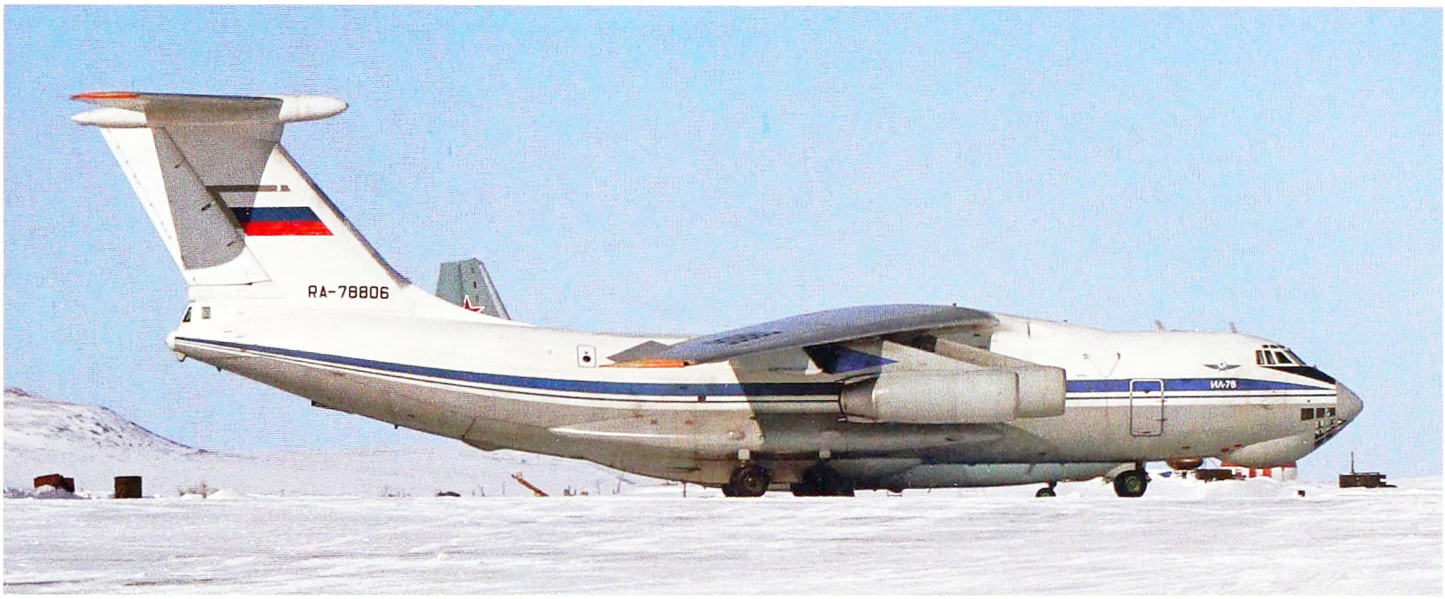
of operations, the combat readiness of the bomber division as a whole, and ability of crews to relocated to *ad hoc* bases and use the aircraft's standard weapons fit were checked on and improved at the same time.

For starters, the division was placed on ready alert. Four Tu-95MSs – '01 Red' *Irkutsk* and '05 Red' from the 182nd GvTBAP, plus '56 Red' and '59 Red' *Blagoveshchensk* from the 79th TBAP – redeployed from their home base (Ookraïnka AB) to the polar auxiliary airstrip at Anadyr' (Oogol'nyy airport). The flight lasting many hours passed in difficult weather conditions over international waters of the Pacific Ocean. It is worth noting that the mission was performed by aircraft captains in their first and second year of training; this was the first time they participated in an operation involving such a high degree of responsibility. For the first time in many years, young Long-Range Aviation crews were allowed to participate in the exercise. This was made possible by preliminary training sessions held in the division. Over a three-month period the 326th TBAD was able to prepare 38 crews which, after due analysis of their training results, were cleared for the exercise.

Maj. Denis Pustobayev, the captain of '59 Red', told journalists after the flight that such long missions had not been flown in the division for a long time – the outbound leg of the flight alone had taken 12 hours non-stop. The only thing that caused some 'disappointment' on the part of the pilots was that the bombers were not intercepted by foreign fighters when flying over international waters. This was probably caused by adverse weather. Nevertheless, the Russian missile carriers

Tu-95MSs '01 Red' and '56 Red' at Anadyr'-Oogol'nyy in April 2006.

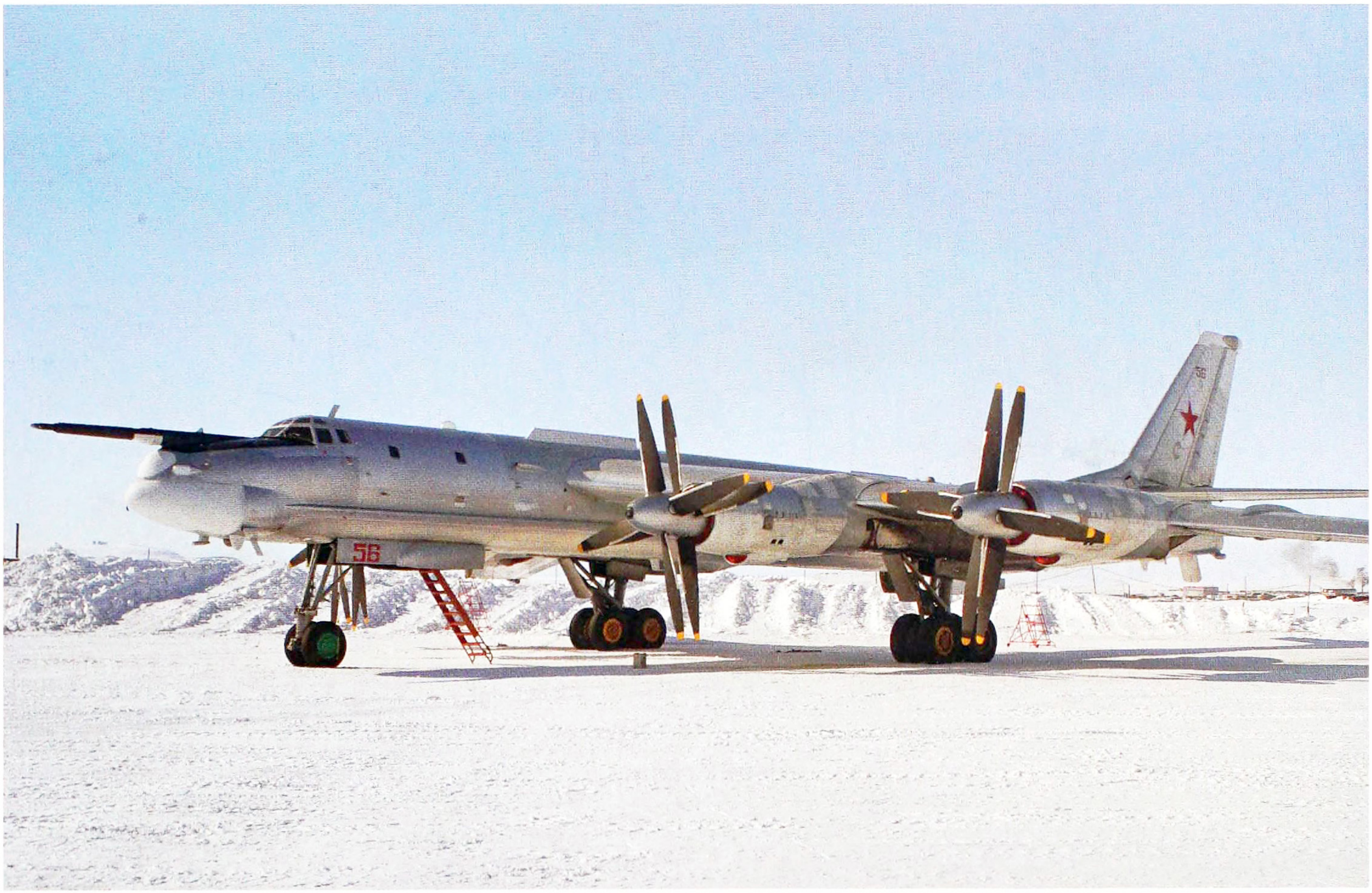




IL-78 RA-78806 (seen at Anadyr') took part in the April 2006 exercise.

slipped through the NORAD radar coverage zone near Canadian shores unhindered.

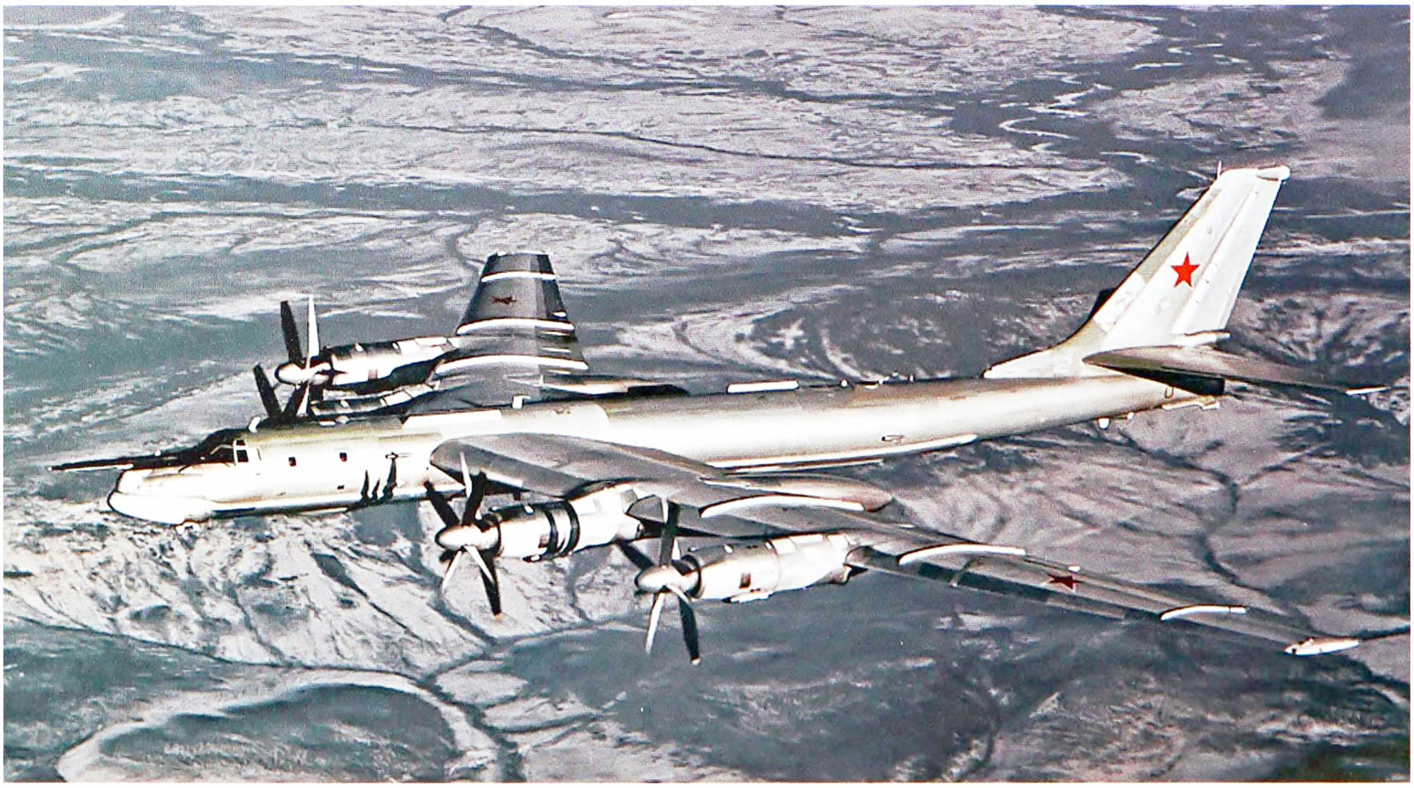
Meanwhile, a further two *Bear-Hs* from the 79th TBAP and a pair of Tu-22M3 missile carriers from the 444th TBAP based at Vozdvizhenka AB took off to fulfil a practice mission over the Sea of Japan and the Pacific. As they crossed the border and headed into international waters near Japan, the Tu-95MSs were intercepted by Japanese Air Self-Defence Force fighters. The crews acquainted themselves with the peculiarities of long flights over the ocean at a considerable distance from the shore while practicing the use of cruise missiles. The *Bears* were forced to return to base a little earlier than planned after encountering severe turbulence caused by a storm front. Back at base, Tu-95MS communications officer Maj. Robert Lapko, his squadron's Chief of Communications, told journalists that strong clutter indicative of a storm front appeared on the radarscope at an altitude of 8,500 m



79th TBAP Tu-95MS '56 Red' in the snow and sunshine at Anadyr'.

(27,890 ft). This meant the possibility of lightning strike which could put the aircraft's electric equipment out of action. When the aircraft's navigator Maj. Nikolay Pashevkin looked up through the observation blister and saw the storm front overhead, a decision to head back to Ookraïnka was taken.

As the Russian aircraft were escorted by the JASDF interceptors a radio exchange took place between the sides. One of the Tu-95MS captains, Maj. Aleksandr Shmit'ko, said that the crew used a set of standard phrases accepted for such cases to communicate with the Japanese pilots. *'There were no provocation on our part* – he said – *We were calmly doing our job while they did theirs.'* However, the Russian pilots concede that possibly there



was also an American fighter among the intercepting jets. The assumption was based on the manner of piloting typical of the Americans: one of interceptors approached very close to the missile carrier, coming within 15 m (50 ft). Two Japanese interceptors shadowed the *Bears* for more than two hours, with a refuelling tanker tagging along some way behind.

Three days later the 182nd TBAP aircraft returned to Ookraïnka AB. Departing from the auxiliary airfield at Anadyr', the bombers followed the coastline of Alaska and Canada, flying over international waters of Beaufort Sea and performing simulated cruise missile

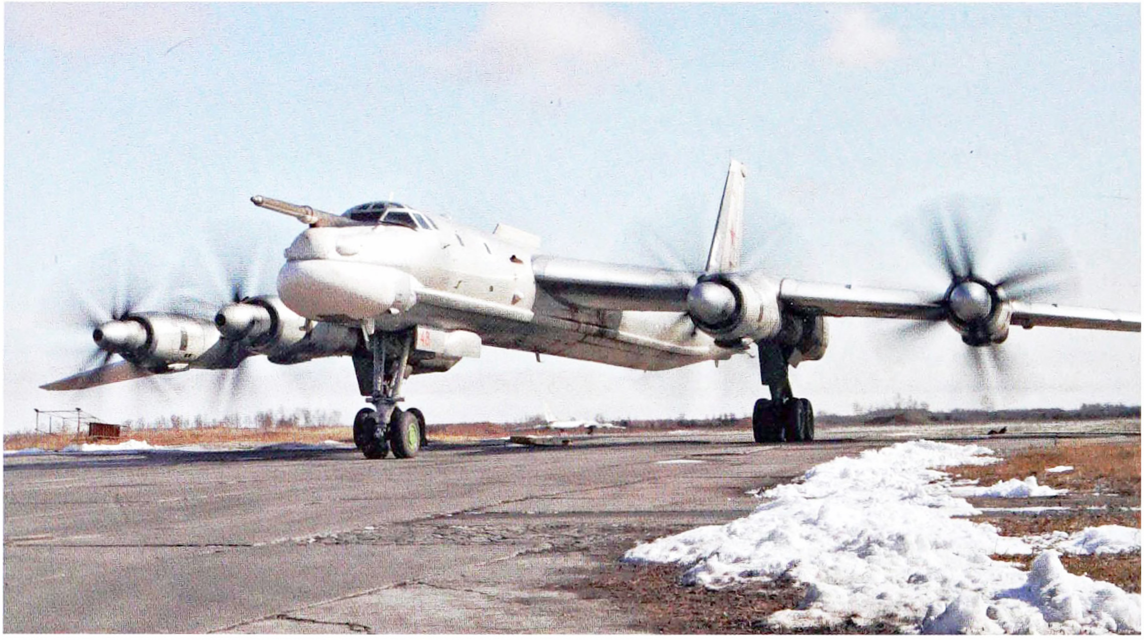
Above and opposite centre: IL-78M '50 Blue' was also used to refuel the participating bombers. It is seen near the Russian coast.

The same tanker seen at Anadyr'-Oogol'nyy airport.

Opposite page: One of the participating Tu-95MSs.

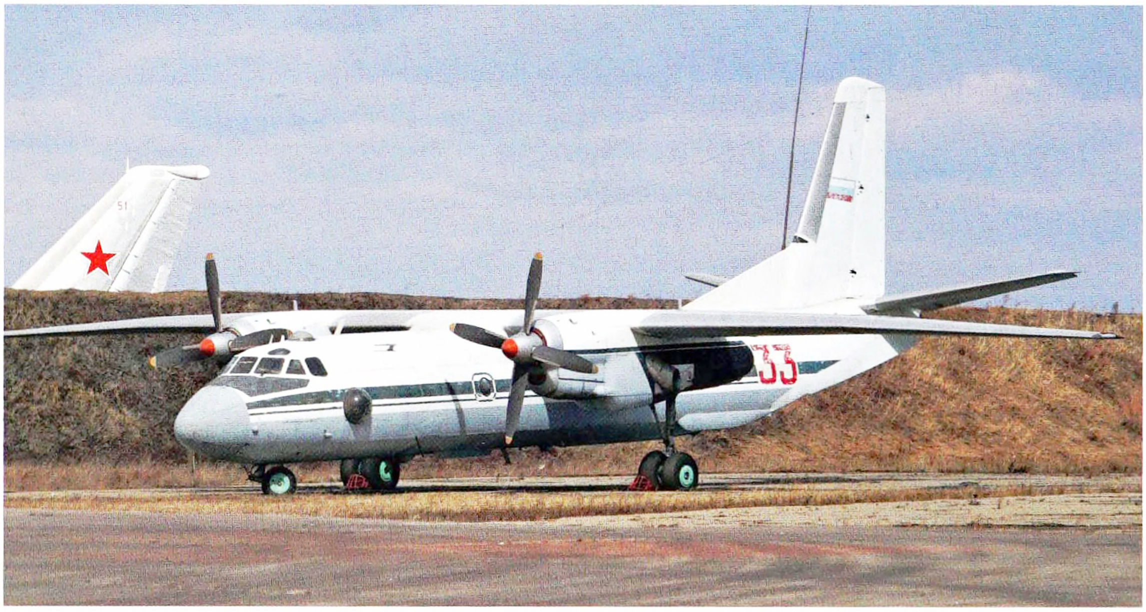
One more IL-78M involved in the April 2006 exercise, '35 Blue'.

79th TBAP Tu-95MS '48 Red' prepares to taxi out for take-off.

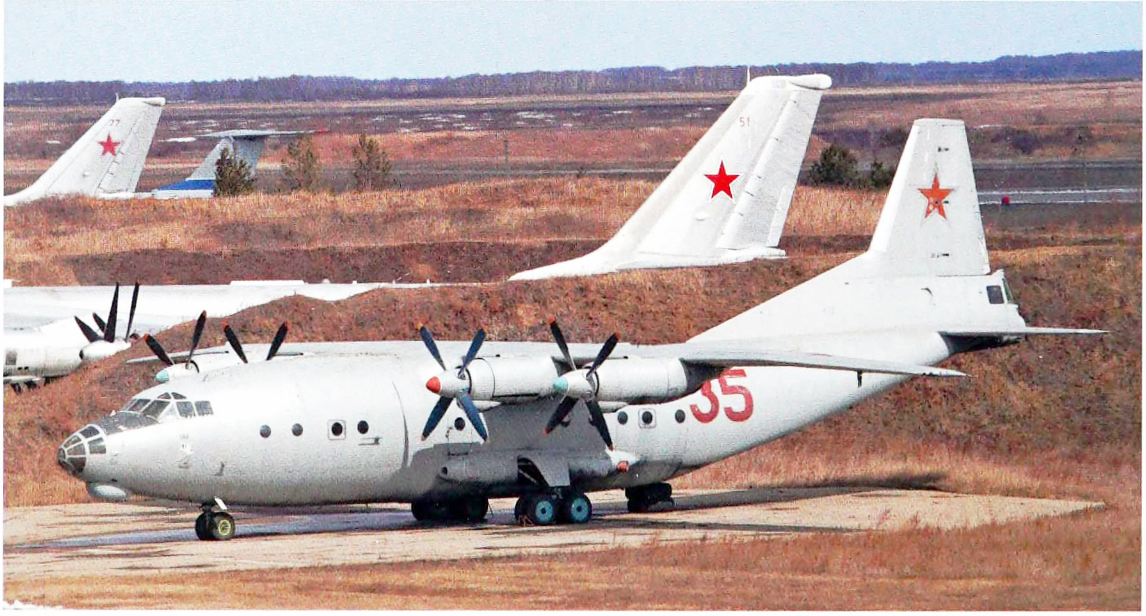


Opposite page: Tu-134UBL '12 Blue' *Tsna* (named after a Russian river) has been converted to VIP configuration.

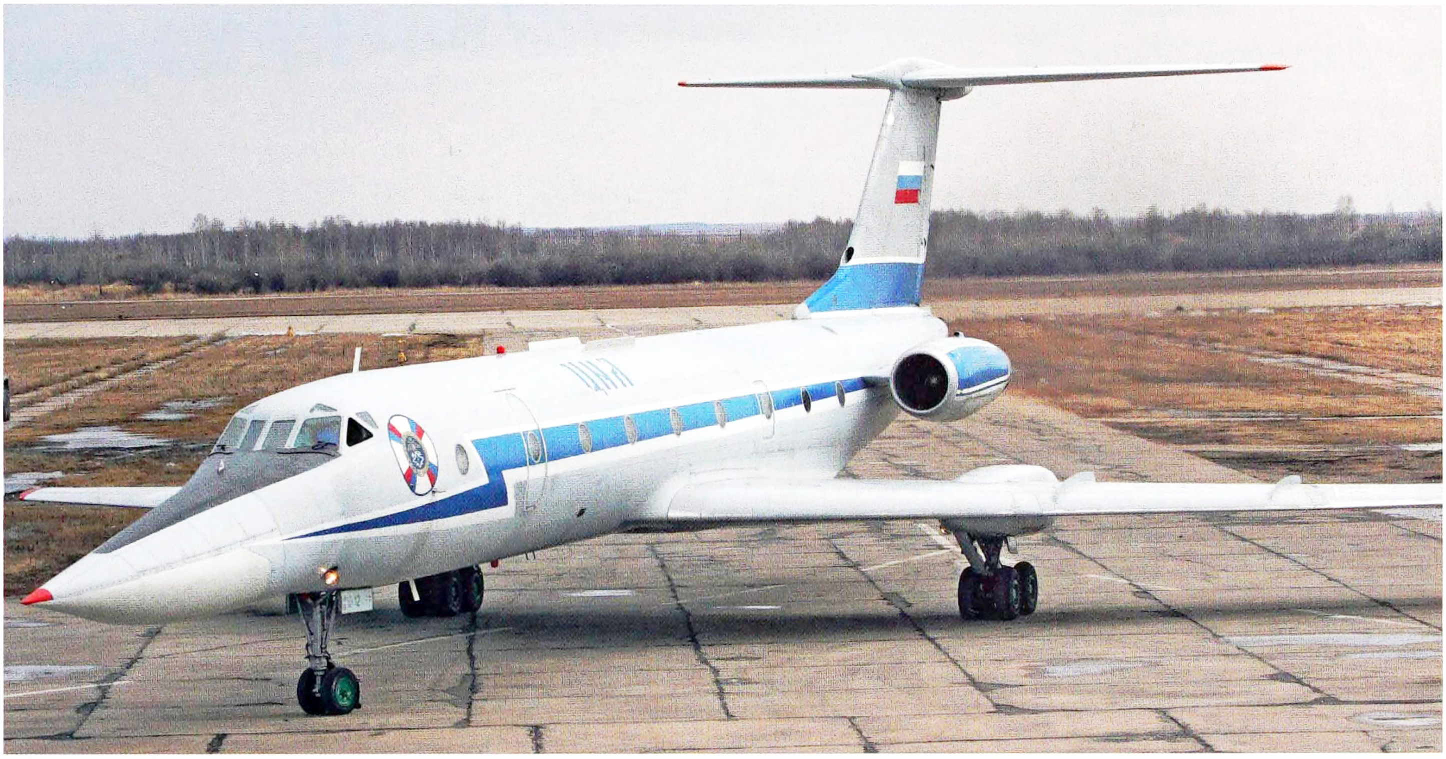
In addition to bombers, Ookraïnka is home to this early production An-26 transport.

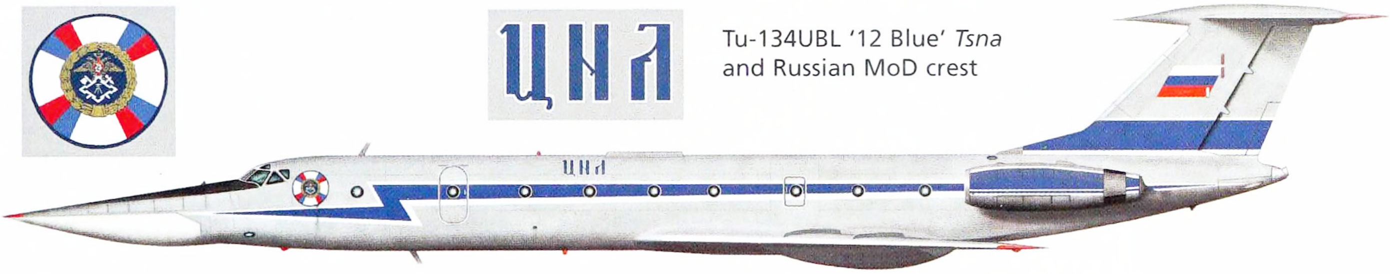


An-12BP '35 Red' is also used for supporting the operations of the bomber units at Ookraïnka.

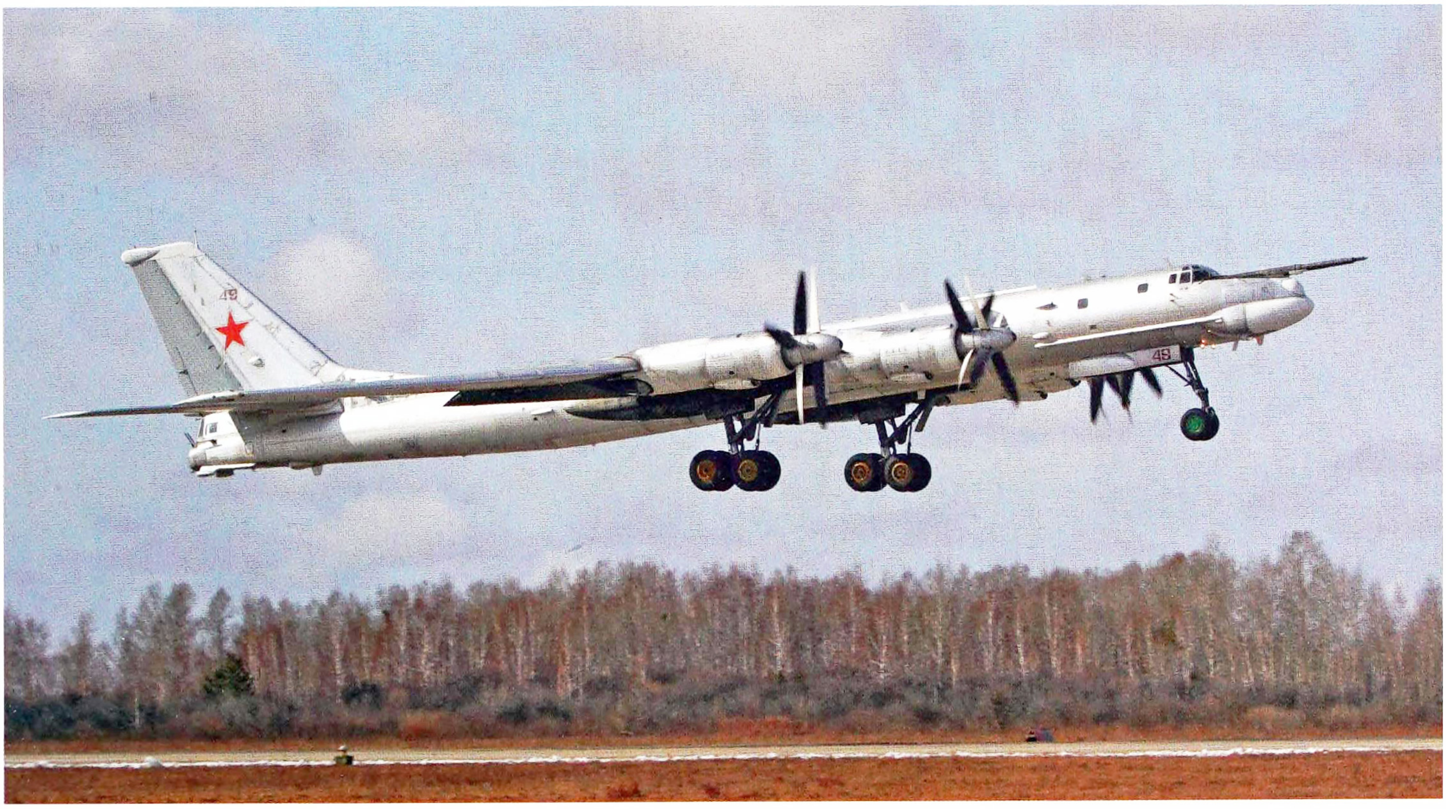


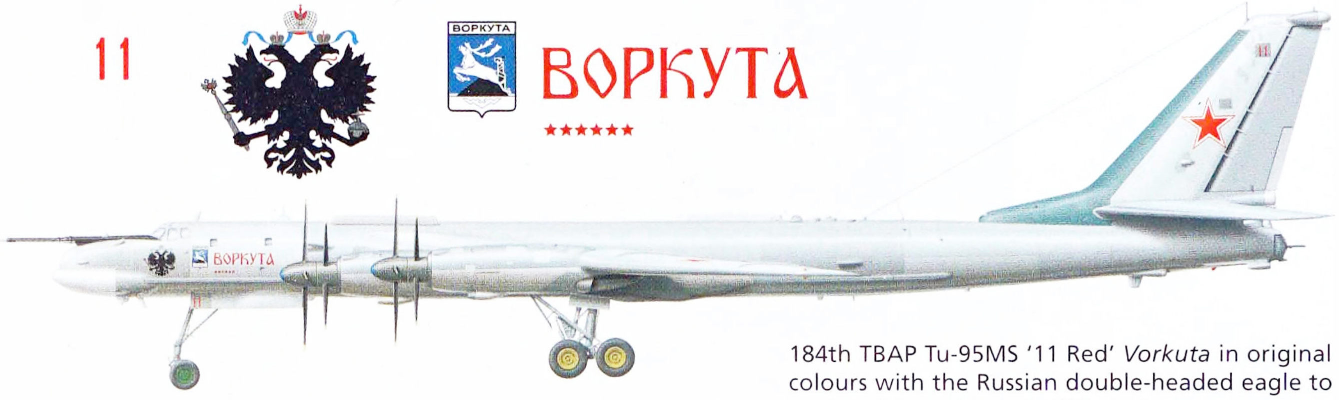
Opposite page: Tu-95MS '49 Red' leaves Ookraïnka AB on a training mission.



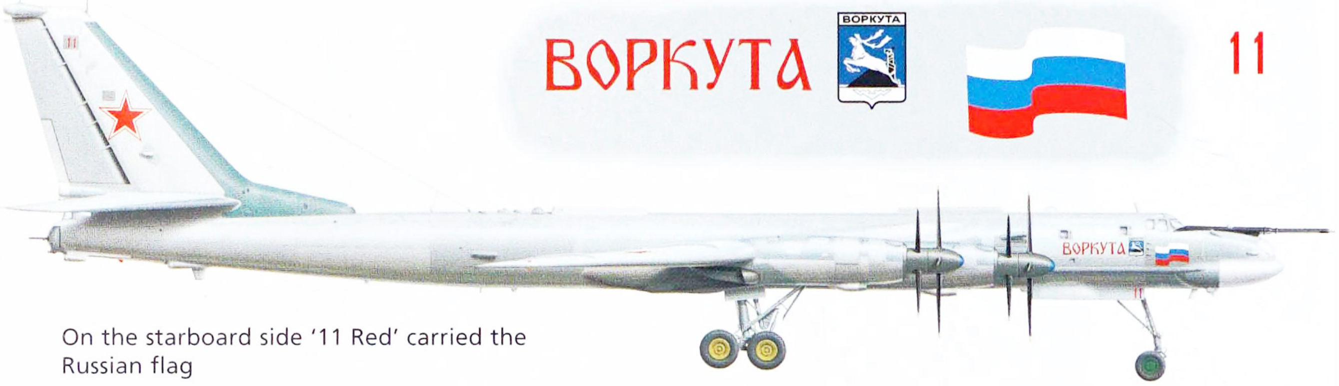


Tu-134UBL '12 Blue' *Tsna* and Russian MoD crest




11
ВОРКУТА
ВОРКУТА

184th TBAP Tu-95MS '11 Red' *Vorkuta* in original colours with the Russian double-headed eagle to port and the city crest of Vorkuta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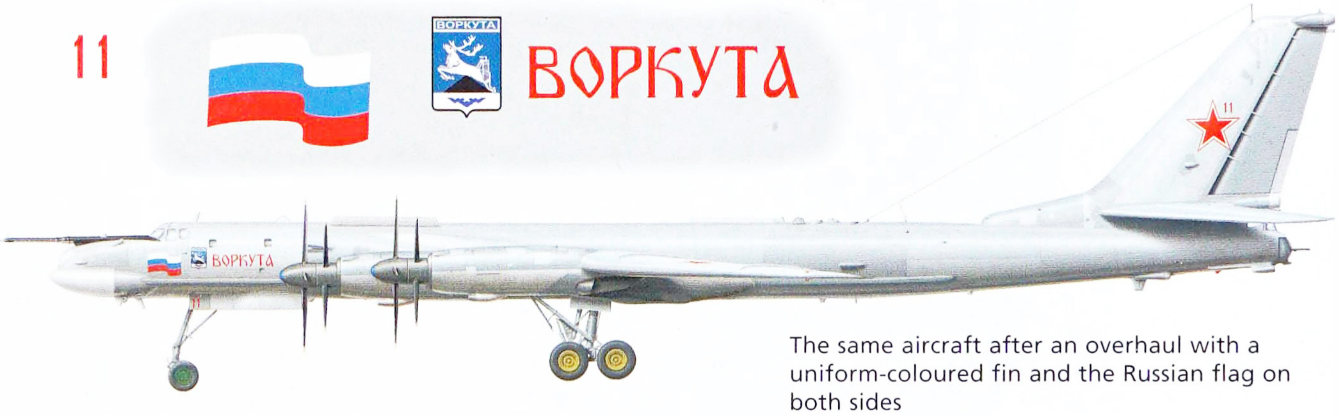
11

On the starboard side '11 Red' carried the Russian flag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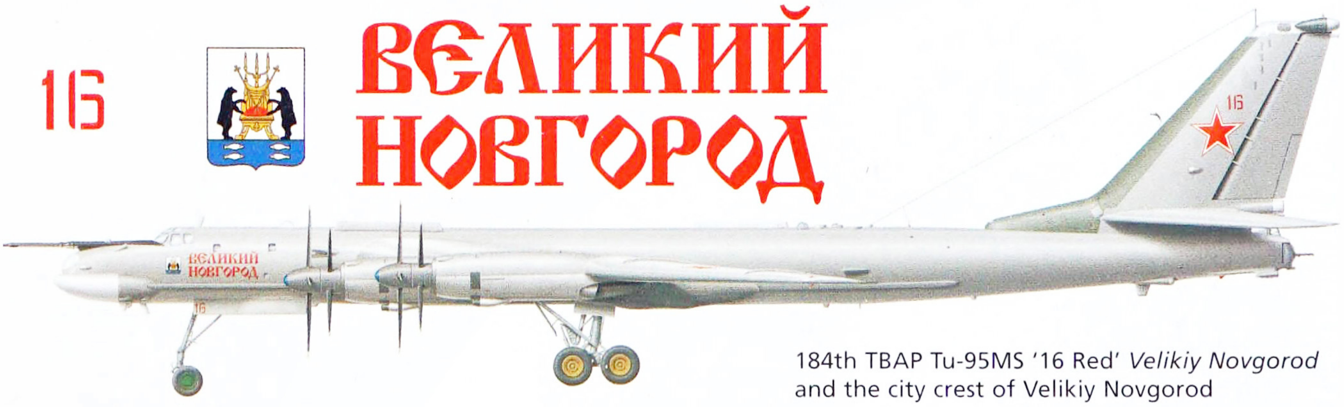
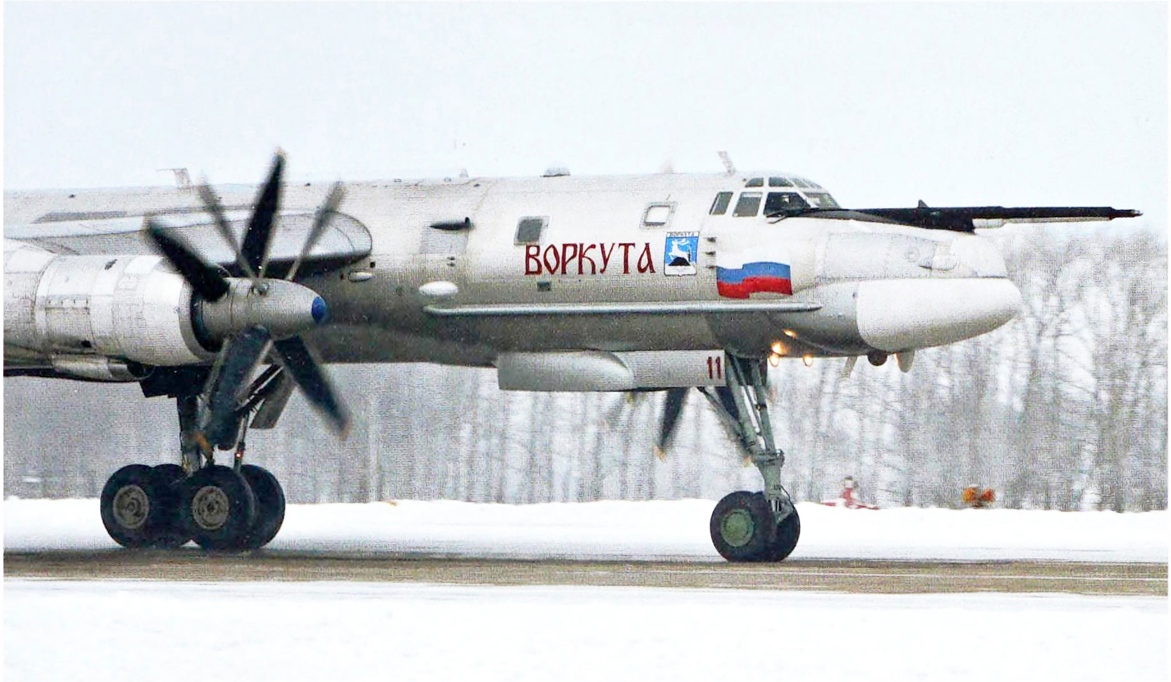
ВОРКУТА

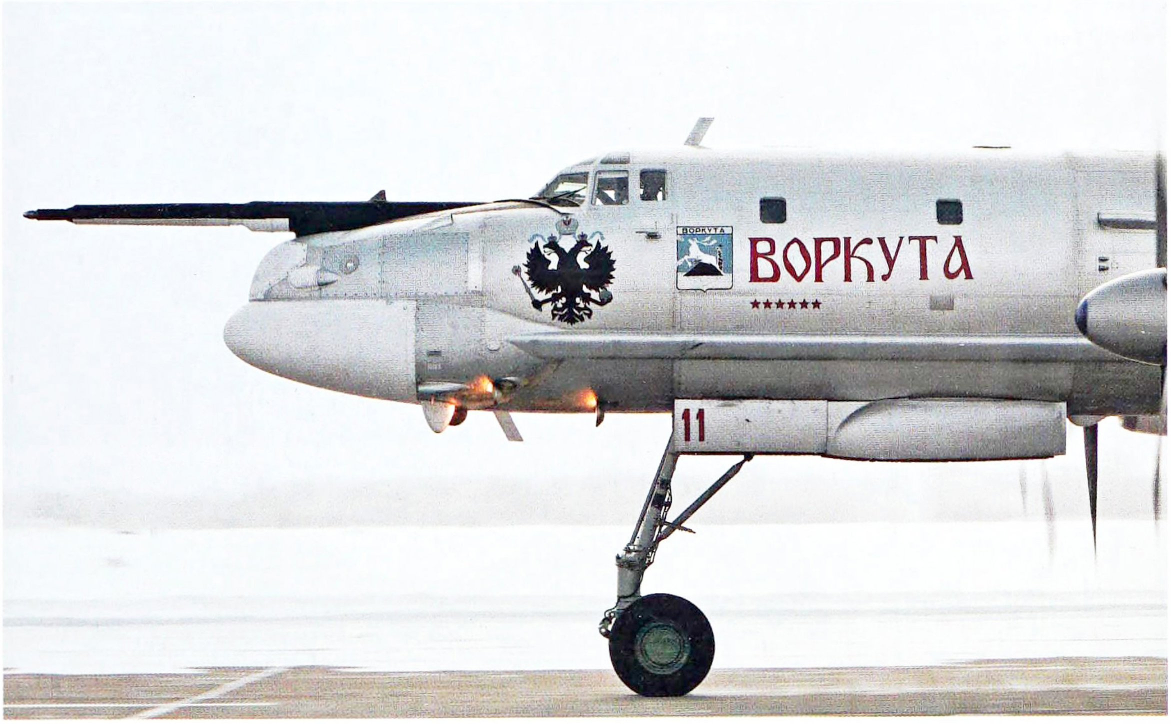
The same aircraft after an overhaul with a uniform-coloured fin and the Russian flag on both sides


16
ВЕЛИКИЙ
НОВГОРОД

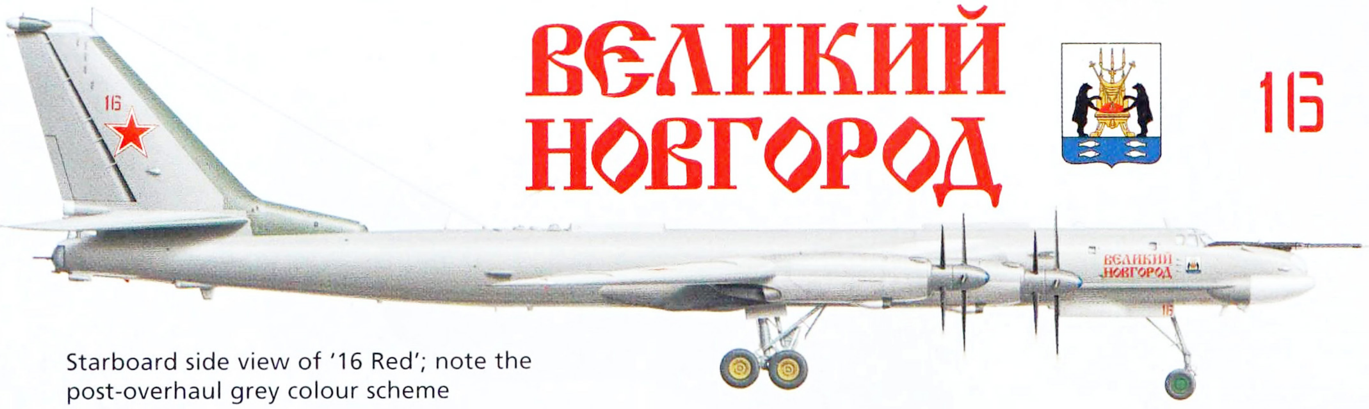
184th TBAP Tu-95MS '16 Red' *Velikiy Novgorod* and the city crest of Velikiy Novgorod



Tu-95MS '11 Red' *Vorkuta* is the only 184th TBAP aircraft to carry a Russian flag on the nose.



The port side of Tu-95 '11 Red' originally featured a 'double eagle' and six mission markers.


ВЕЛИКИЙ
НОВГОРОД
16
16

Starboard side view of '16 Red'; note the post-overhaul grey colour scheme

A homecoming ceremony at the 182nd GvTBAP after the April 2006 exercise, featuring the unit's banner and a pennant for valour awarded in 1980.

DA Commander Lt.-Gen. Igor' Khvorov (right) and the 182nd GVTBAP CO at the ceremony.

attacks, whereupon they landed at their home base. Concurrently six Tu-22M3s of the 2nd GvTBAP based at Belaya AB attacked a target at the Nogotai practice range near Irkutsk with 500-kg (1,100-lb) bombs. The bombs were delivered with minimum deviation, the bomber crews earning top grades for the mission. In the same time frame, four more Tu-22M3s from the 444th TBAP destroyed practice targets on the Novosel'skoye target range (Primor'ye Territory) with live 250-kg (551-lb) FAB-250 bombs.

The events described above took place in Siberia and in the Russian Far East; yet the exercise also involved aircraft from European Russia – the missile carriers of the 22nd TBAD from Engels-2 AB. Having made a flight of many hours' duration, two Tu-160s and two Tu-95MSs belonging to the 121st and 184th TBAPs respectively launched their Kh-55 cruise missiles at a northern target range, operating in concert with the aircraft of the 326th TBAP. All designated targets were destroyed by this united group of aircraft which converged after taking off from airbases located thousands of kilometres apart. Upon inspection of the targets it turned out that the cruise missiles had impacted on the range within a considerably smaller radius than expected. This was excellent work, especially given that the launch had occurred in a strong wind and poor visibility.

It is noteworthy that the strategic missile carriers were flying to the limit of their radius of action during this exercise. In keeping with the tradition of the Russian Long-Range Aviation, on returning to their home airfields the crews were greeted by a parade formation of the regiments' personnel with the unit banners flying.

The exercise included a total of 53 bomber sorties. Logistical support was provided by Russian Air Force IL-76MD and An-12 transports; also, Ilyushin/Beriyev A-50 AWACS aircraft and IL-22 ABCPs supported the missions involving actual missile launches. During the exercise the 37th Air Army actively cooperated with the Far Eastern Air Force/Air Defence Force formation which put up Su-27 fighters and MiG-31 interceptors.

Lt.-Gen. Khvorov deals out handshakes and valuable gifts (high-quality wristwatches) to the aircrews.

The 326th TBAD CO Maj.-Gen. Aleksandr I. Afinogentov personally pours out champagne for the aircrews.

Maj.-Gen. Afinogentov congratulates the personnel on a different occasion.

Here's to the successfully completed mission!

A Tu-95MS is shadowed by two F/A-18s from USS *Nimitz* on 9th February 2008.

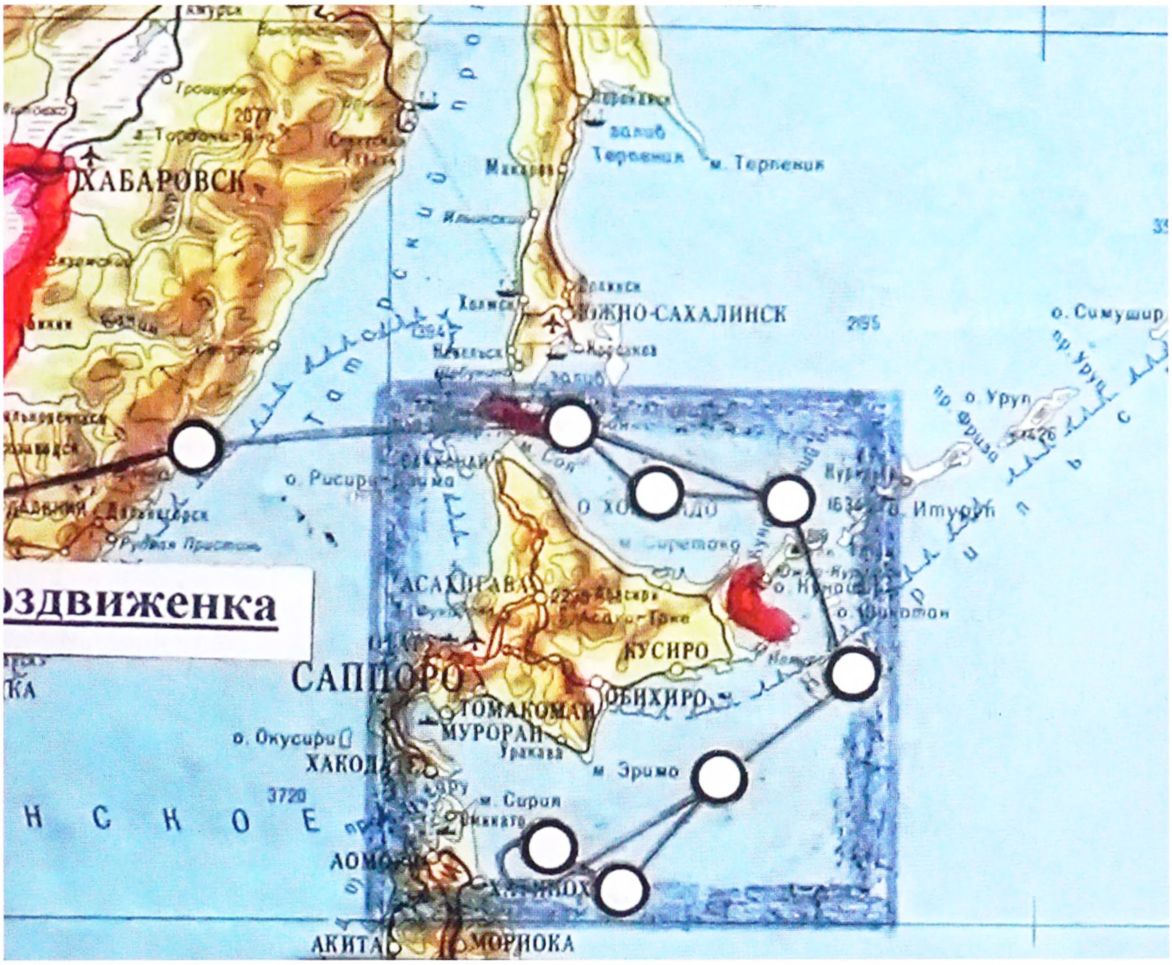
The April 2006 exercise was held on a truly impressive scale. Within a few days, 37th Air Army missile carriers flew ultra-long-distance missions in the south-east and northern areas of the Pacific, the north-western part of the Arctic Ocean, over the expanses of Siberia and the Far East. They also approached the coasts of Alaska and Canada, much to the displeasure of the US and Canadian governments.

In June 2006, two aircraft of the 182nd TBAP were deployed westward to take part in the Russian-Belorussian joint exercise *Shchit Soyooza* (Union Shield).

Between 26th and 30th September 2006 the 37th Air Army again conducted a command/staff exercise. 93 sorties were flown; four regiments dropped bombs at target ranges with which they had no previous experience, three long-range ALCMs were launched, complemented by 48 simulated missile launches. On 29th September, 54 Tu-160, Tu-95MS, Tu-22M3 and IL-78M aircraft were simultaneously airborne in the northern, southern, western and eastern parts of Russia. During this exercise in-flight refuelling was performed by crews of the Tu-95MSs which flew missions to the Atlantic Ocean and Caspian Sea areas; in the course of these, a total of 40 tonnes (88,180 lb) of fuel was transferred to the bombers. Apparently it was within this time frame in September 2006 that NORAD scrambled Canadian Armed Forces CF-18A Hornets from CFB Cold Lake in Central Alberta and USAF F-15s from Elmendorf AFB, Alaska, to intercept several Tu-95MSs approaching the coasts of Alaska and Canada.

In northern Europe, Russian Tu-95s and Tu-160s skirting Norwegian borders were keeping NATO fighters plenty busy as well. For example, at the Royal Norwegian Air Force base in Bodø, beyond the Arctic Circle, two F-16s were always on ready alert to deal with surprise visitors from the east. *'We have*

Bear-Hs approaching Alaskan shores receive the attentions of USAF 3rd Fighter Wing F-15s.


ХАБАРОВСК
ЮЖНО-САХАЛИНСК
зал. Терпения
м. Терпения
о. Симушир
о. Уруп
о. Итуруп
о. Рисири
оздвиженка
САППОРО
АСАХИКАВА
КУСИРО
ОБИХИРО
ТОМАКОМАЙ
МУРОРАН
м. Эримо
о. Окусири
АОМОРИ
АКИТА
МОРИОКА

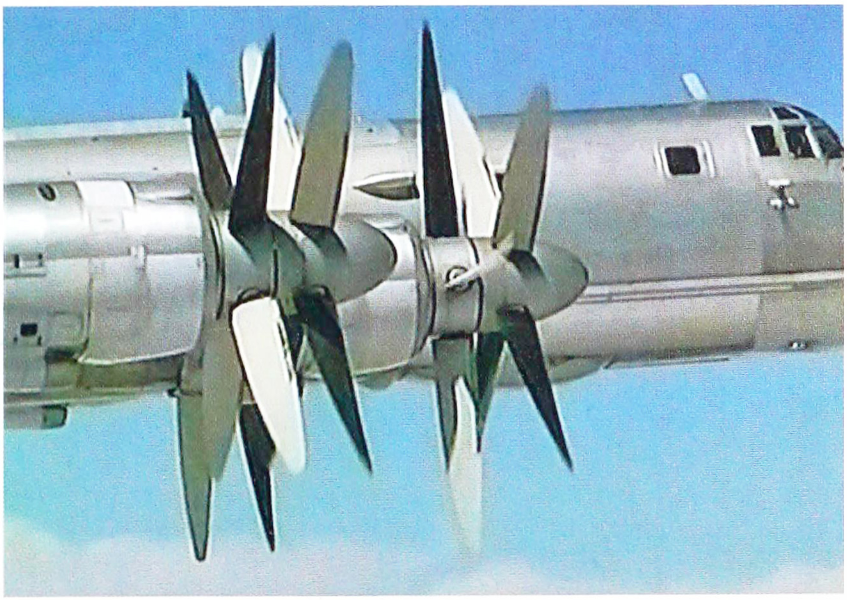
A map showing the route taken by 444th TBAP Tu-22MRs near the coast of Japan during an exercise.

noticed a clear rise in Russian aerial activity over the past year. This has given us a lot more to do,' base air commander general Per Egil Rygg said in 2007. In 2006, RNoAF F-16s made 13 scrambles to 'identify' 14 Russian aircraft. In 2007, this rose to 47 scrambles and a tremendous 88 Russian aircraft intercepted and escorted. Such encounters with Tu-95s were recorded in July and September 2007, among other things.

In July 2007 two Royal Air Force Panavia Tornado F.3s on quick-reaction alert at RAF Leuchars (Fife, Scotland) were scrambled to intercept a pair of Tu-95MSs as they threatened to enter UK airspace. The *Bears* were intent on monitoring the Royal Navy exercise *Neptune Warrior* off Scotland. At the time, such an encounter was rare in comparison with Soviet days, when Tu-95 and 3M bombers regularly flew close to British airspace to probe Britain's air defences.

On 8th-9th August 2007, Long-Range Aviation aircraft successfully carried out the launches of more than ten cruise missiles at the Pemboi target range near Vorkuta (within the Arctic Circle). The missiles were equipped with housings for nuclear warheads. That same month two Tu-95s were intercepted by

A 444th TBAP Tu-22MR seen from a sister ship over the Sea of Japan.



The interceptors often came quite close to the Russian 'visitors'.

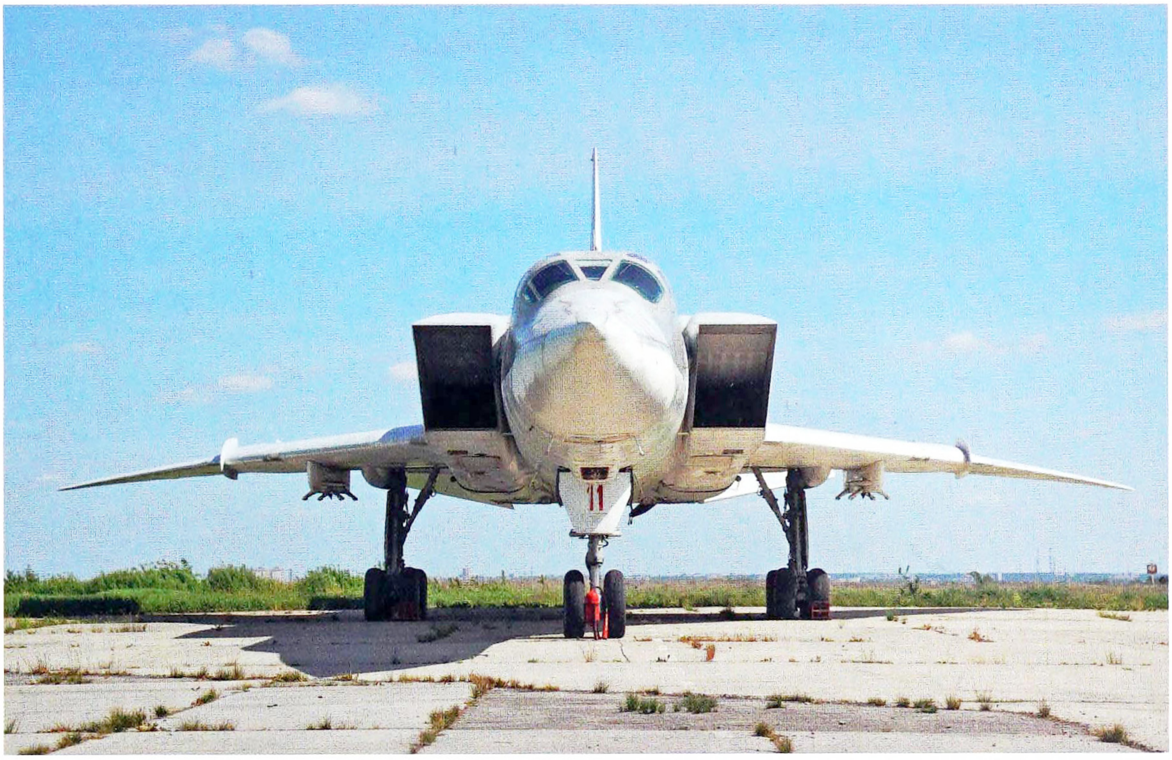
184th TBAP Tu-95MS '11 Red' on final approach.

Tu-160 '19 Red' taxies in after landing at Engels.

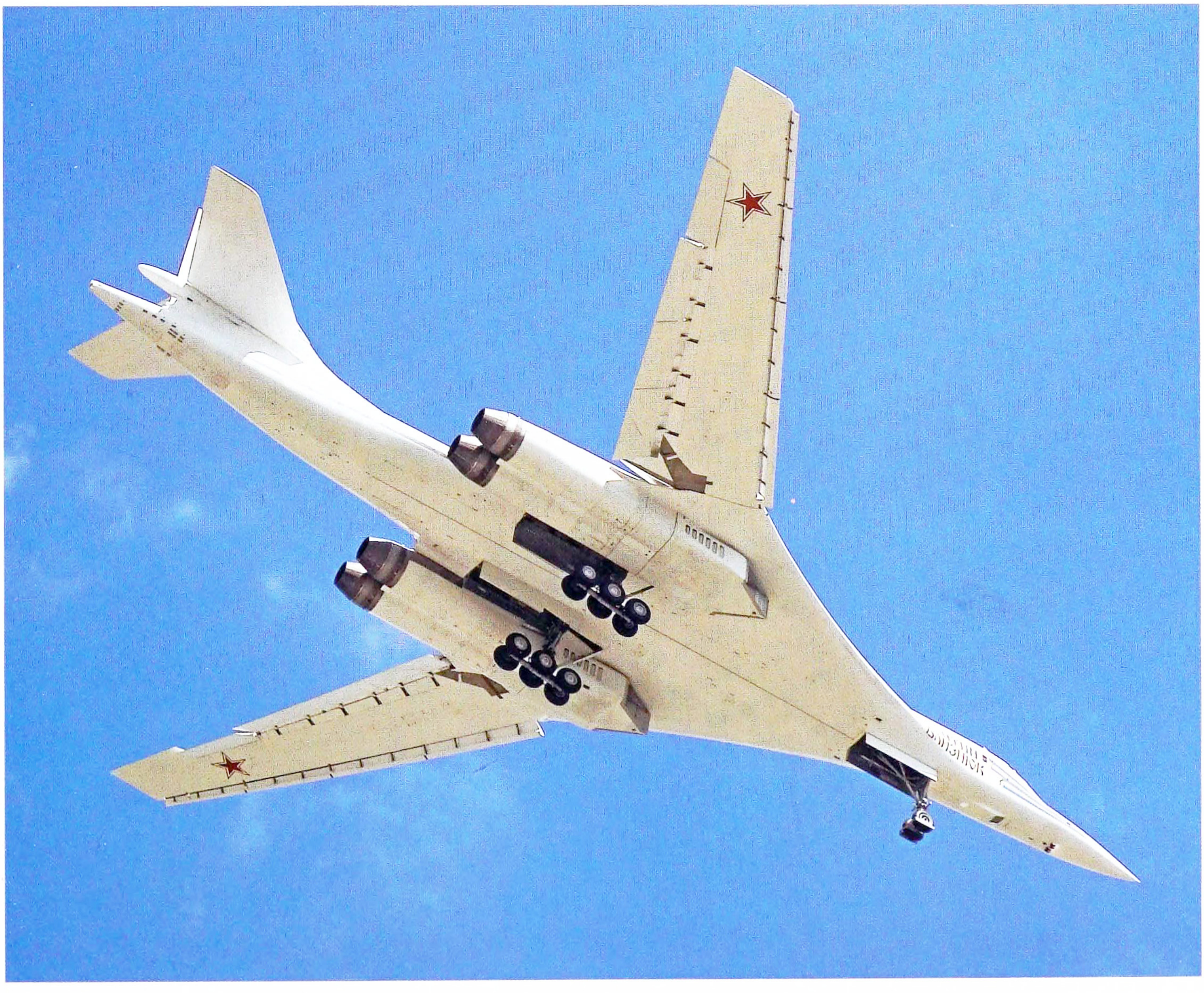
USAF fighters as they prowled around the US Navy base on Guam, while a third *Bear* was escorted away from British shores by two RAF Eurofighter Typhoons over the North Sea.

An important event took place in mid-August 2007. Due to the escalating military and political tension in the world (in particular, due to a series of steps of military character taken by the USA), the then President of the Russian Federation Vladimir V. Putin gave instructions to the effect that the aircraft of the 37th (Strategic) Air Army of the Supreme

Валентин Близнюк
19



'11 Red', a 43rd TsBP i PLS Tu-22M3, awaits the next mission at Dyagilevo AB.



Tu-160 '19 Red' *Valentin Bliznyuk*, one of the upgraded examples with bombing capability, shows off its sleek lines in a low pass.

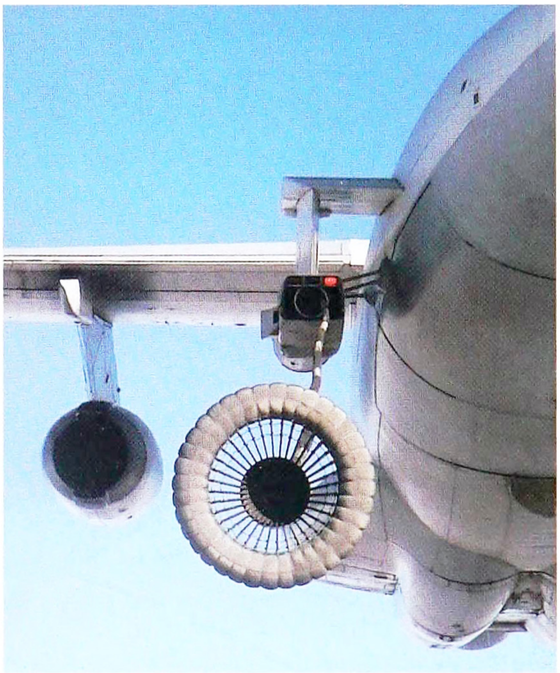
IL-78M '31 Blue' on final approach; all three HDUs are fitted.

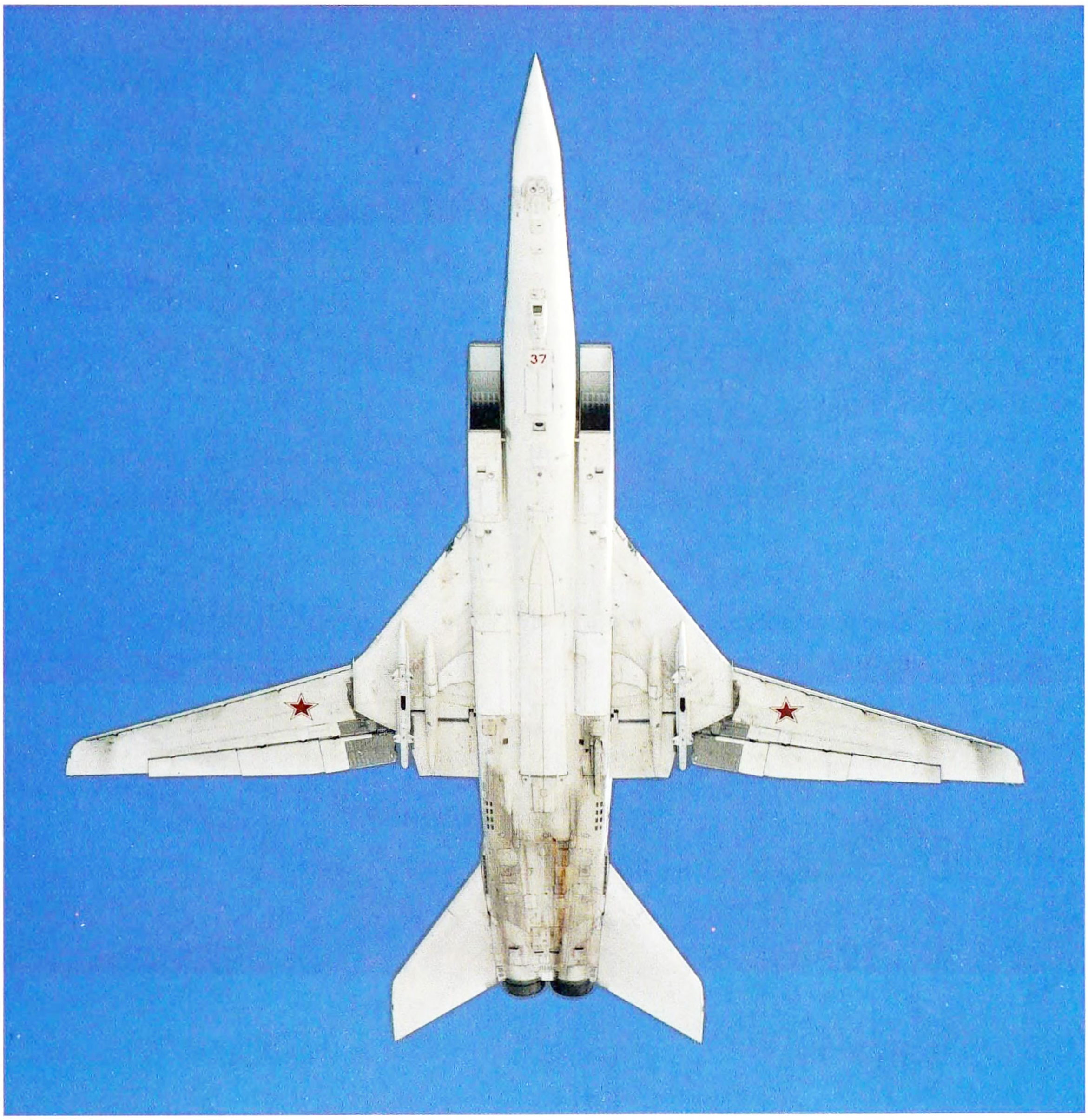
The drogue is deployed from the centre PAZ-1 HDU of an IL-78M.

Flaps and slats already up, an IL-78M taxies in at Dyagilevo AB after a sortie.

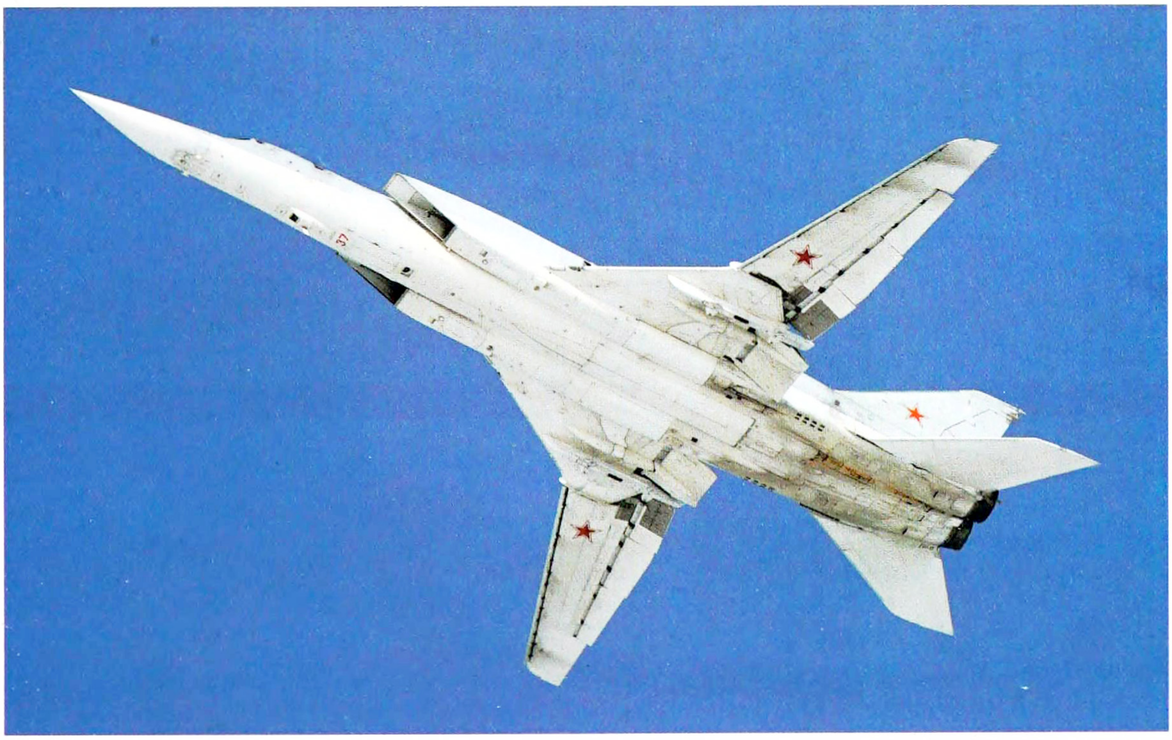
High Command commence patrol flights outside the territory of Russia and resume regular flights over the Pacific and Atlantic Oceans which had not been conducted since 1992. This was the beginning of the DA's mighty comeback which caused much concern in the western world, being perceived as Russia's return to a Soviet-style warlike stance.

From 0 hours on 17th August 2007, in pursuance of the President's instructions, some two dozen aircraft of the 37th Air Army, comprising Tu-160s, Tu-95MSs, Tu-22M3s and IL-78s, backed up in some cases by MiG-31 interceptors and A-50 AWACS aircraft, carried out 50 sorties over international waters, operating out of airfields at Olenegorsk, Vorkuta, Monchegorsk, Tiksi, Anadyr', Engels and Shaikovka. The Tu-160s and Tu-95MSs remained airborne for 13 hours on average. In the course of these flights 21 NATO fighters



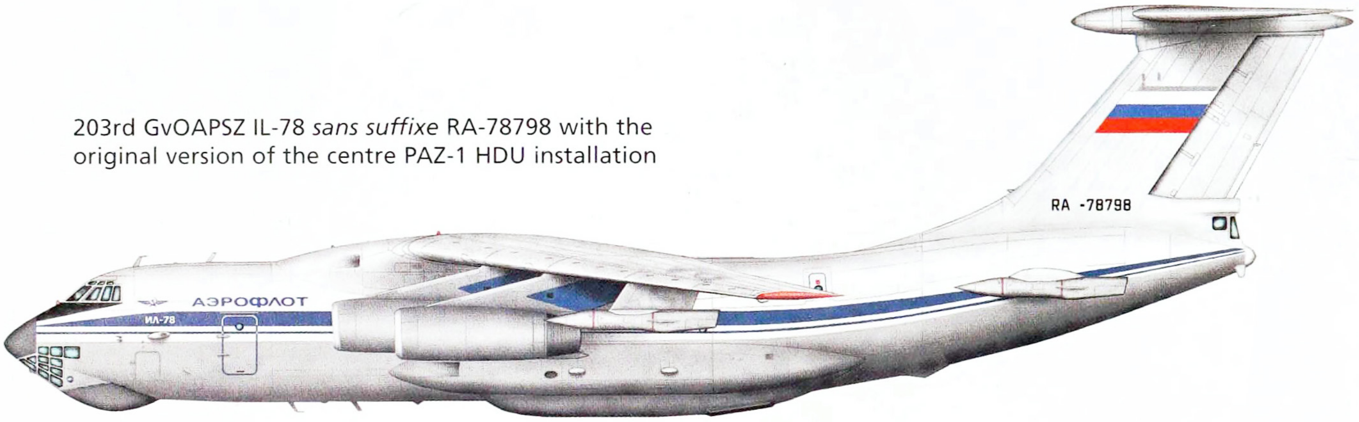


Tu-22M3 '37 Red' shows off its less-than-pristine undersides as it passes directly overhead.

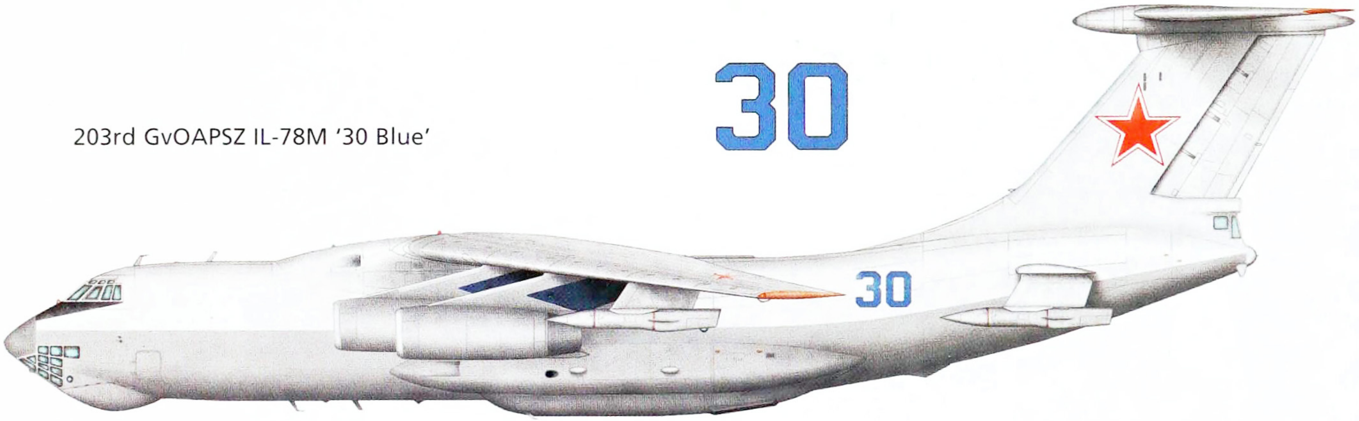


The inboard ends of the *Backfire's* flaps have wear-resistant steel skin panels preventing damage as the wing sweep changes.

203rd GvOAPSZ IL-78 *sans suffixe* RA-78798 with the original version of the centre PAZ-1 HDU installation

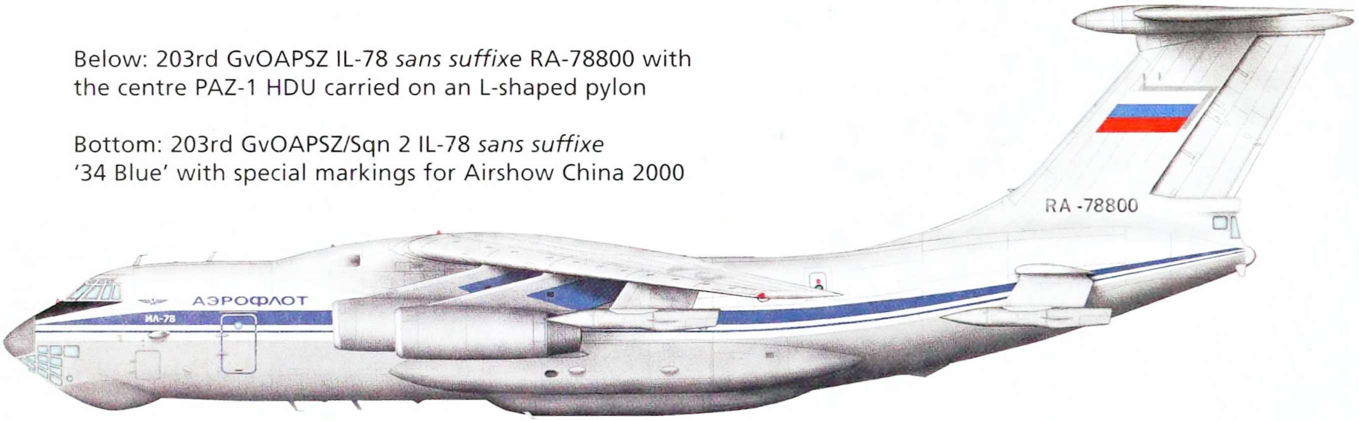

RA -78798
АЭРОФЛОТ
ИЛ-78

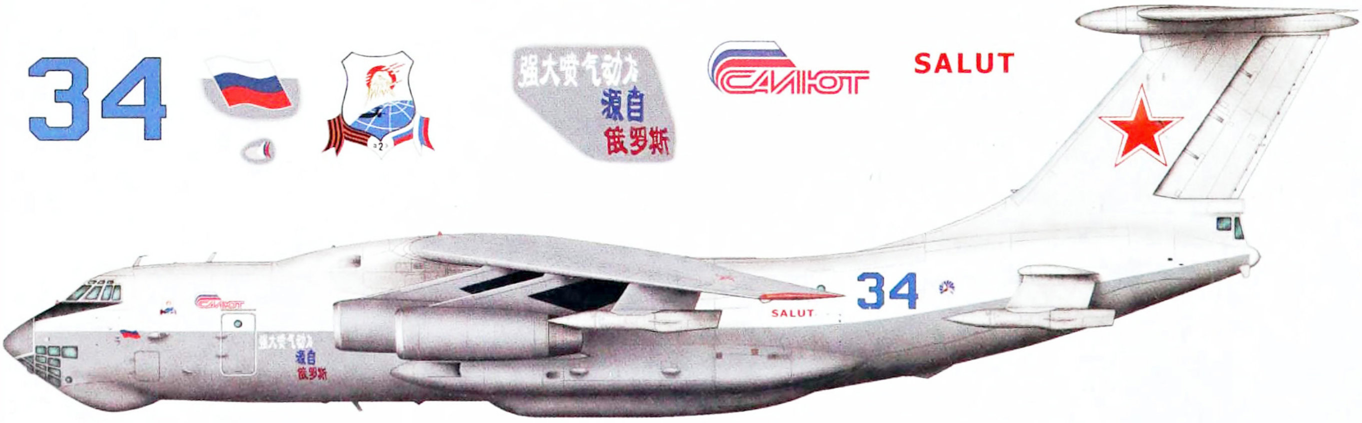
203rd GvOAPSZ IL-78M '30 Blue'



Below: 203rd GvOAPSZ IL-78 *sans suffixe* RA-78800 with the centre PAZ-1 HDU carried on an L-shaped pylon

Bottom: 203rd GvOAPSZ/Sqn 2 IL-78 *sans suffixe* '34 Blue' with special markings for Airshow China 2000


RA -78800
АЭРОФЛОТ
ИЛ-78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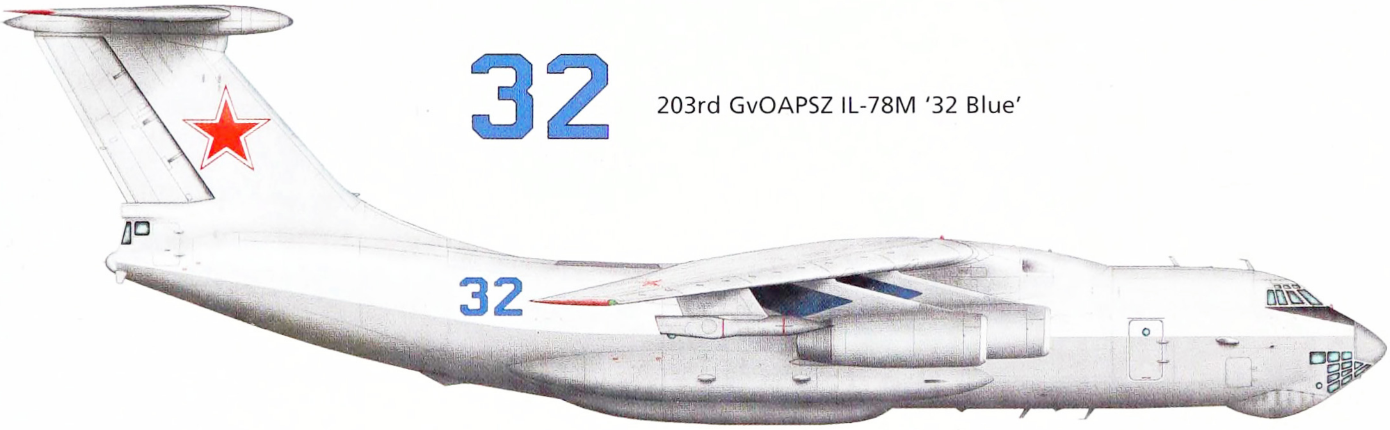
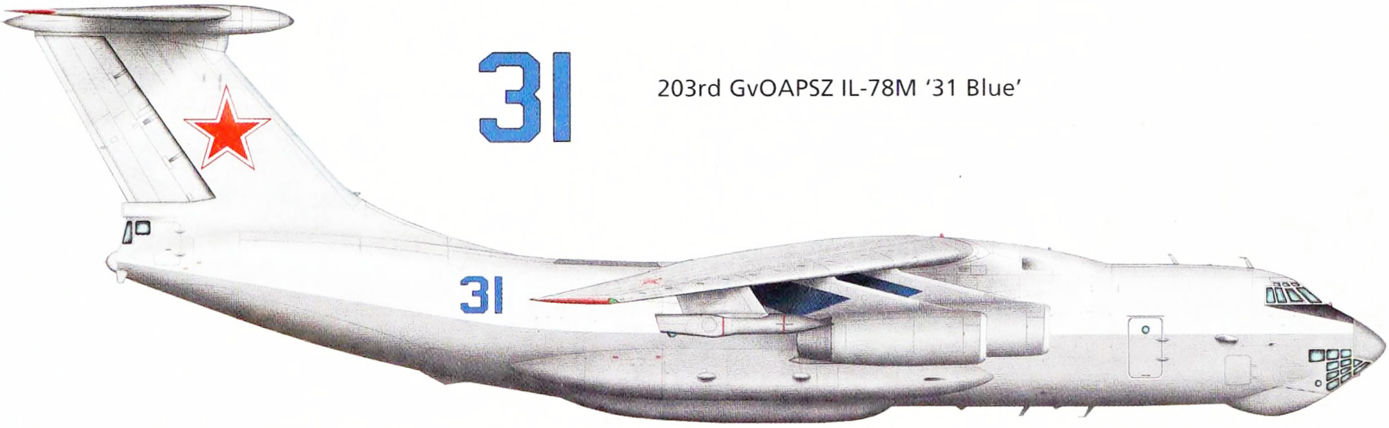
强大喷气动力
源自
俄罗斯
САЛЮТ
SALUT
34
SALUT



203rd GvOAPSZ IL-78M '32 Blue'



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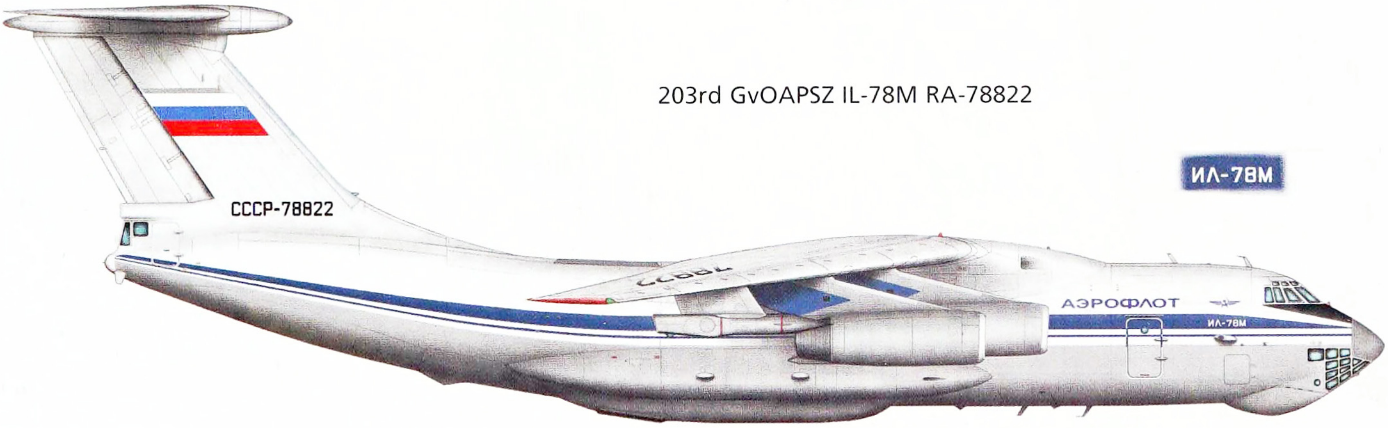
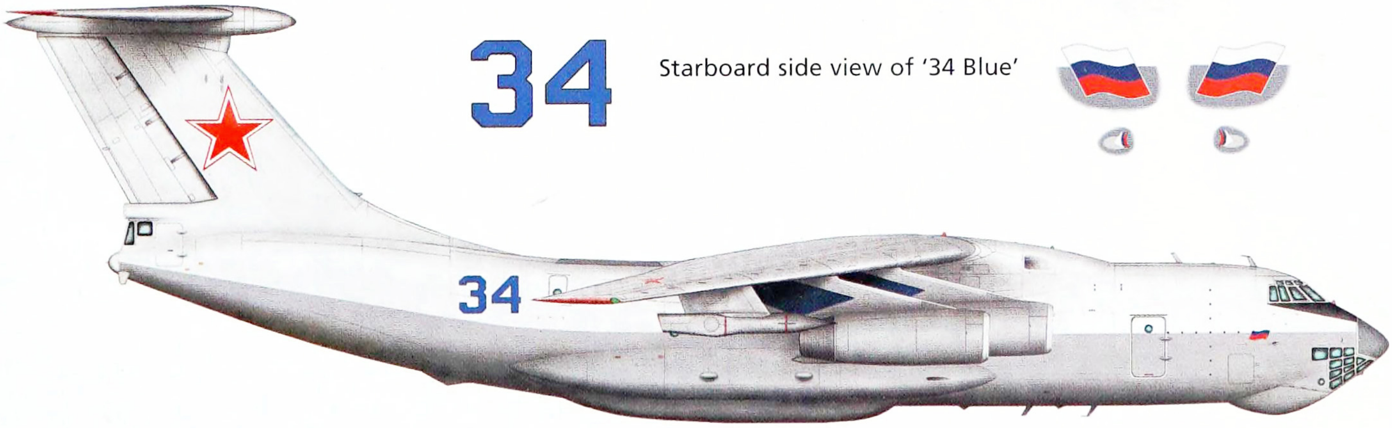
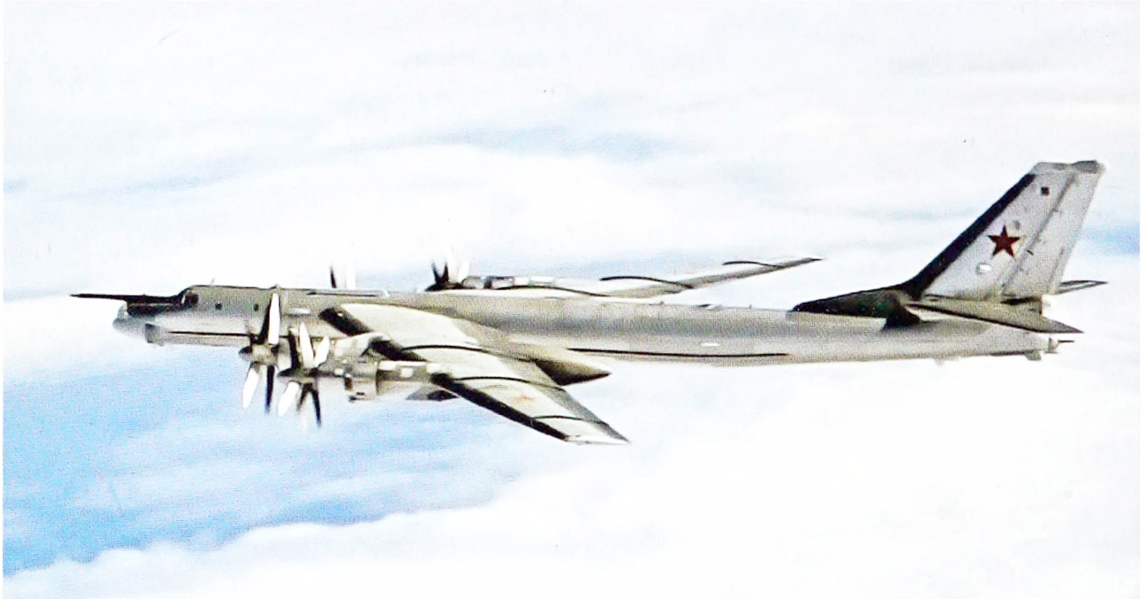

ИЛ-78М
СССР-78822
АЭРОФЛОТ
ИЛ-78М

203rd GvOAPSZ IL-78M RA-78822



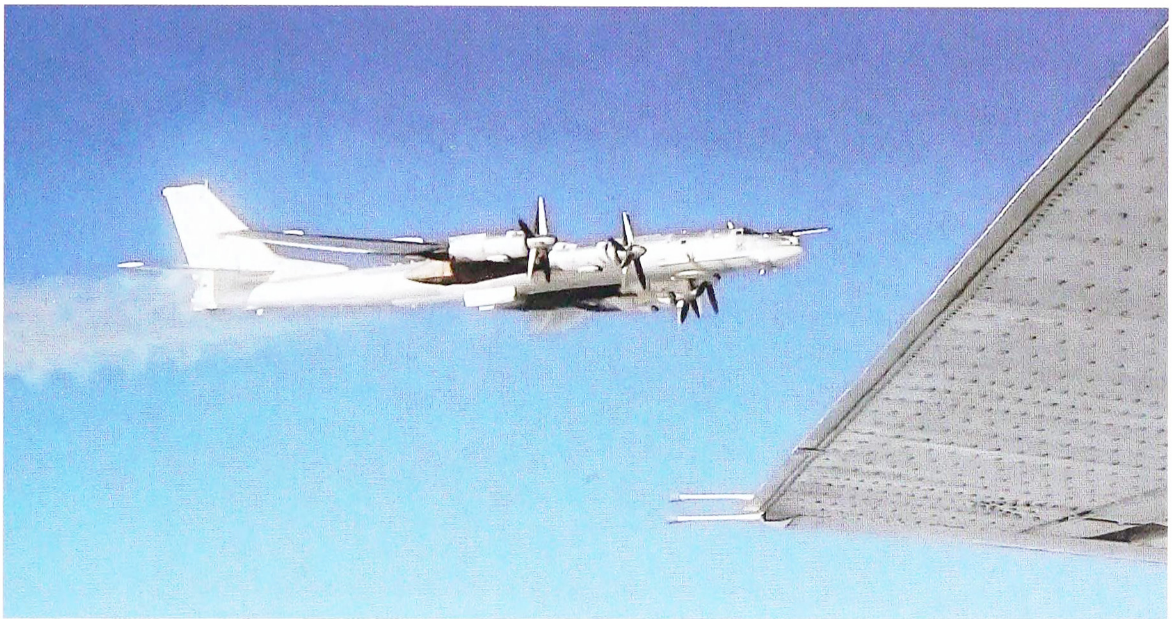
Starboard side view of '34 Blue'



A Tu-95 seen from an intercepting NATO fighter.

3rd FW/19th FS F-15C-39-MC 85-0104/AK escorts 182nd GvTBAP Tu-95MS '02 Red' *Mozdok* away from Alaskan shores.

Bear meets Raptor: the first encounter between a Tu-95MS and an F-22A on 29th November 2007.

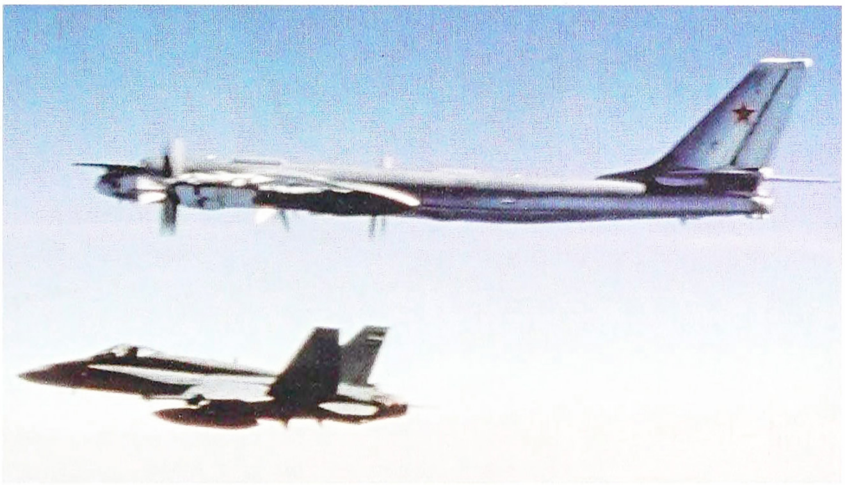


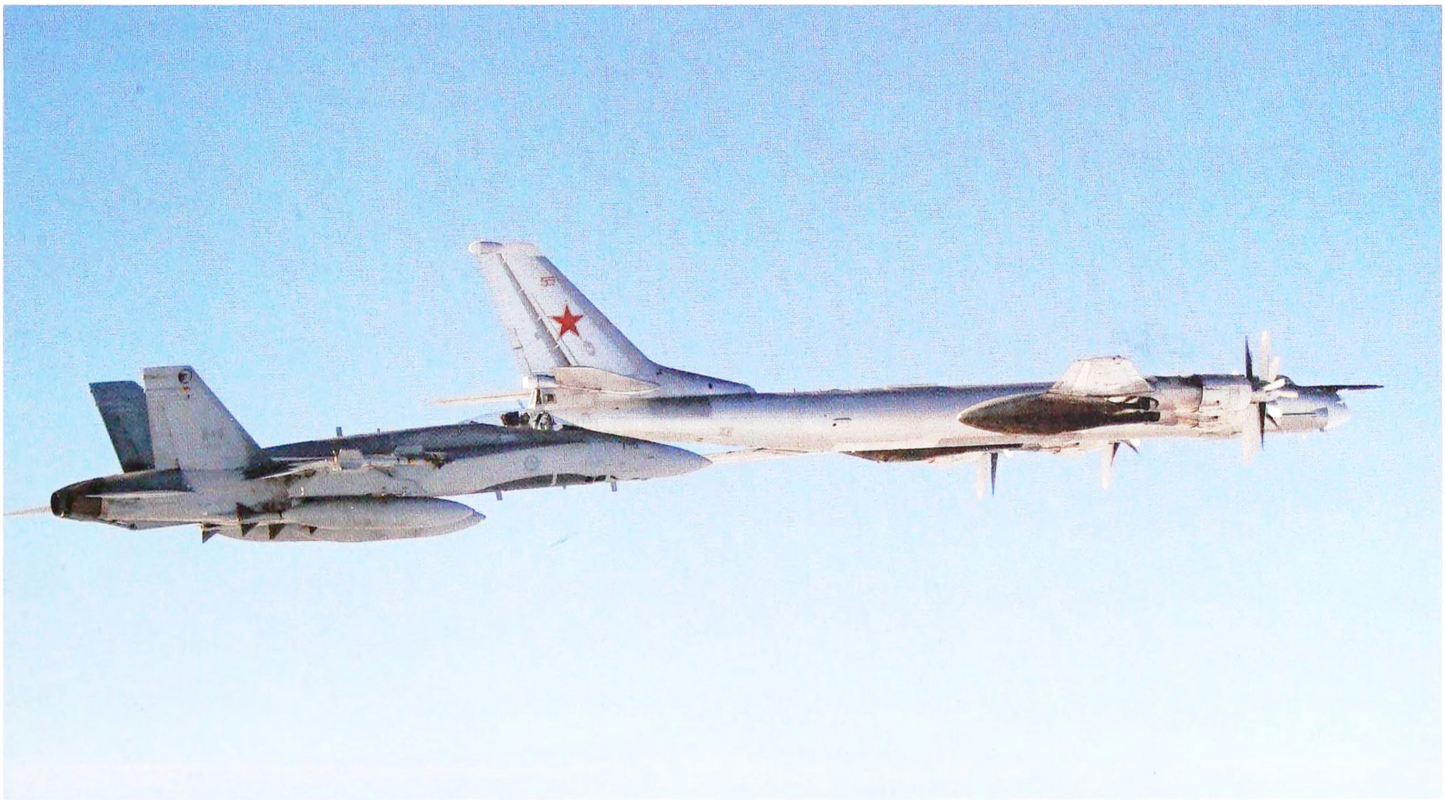
Tu-95MS '01 Red' *Irkutsk* contrailing across the sky is seen from the tail gunner's station of a sister ship. Note the open weapons bay.

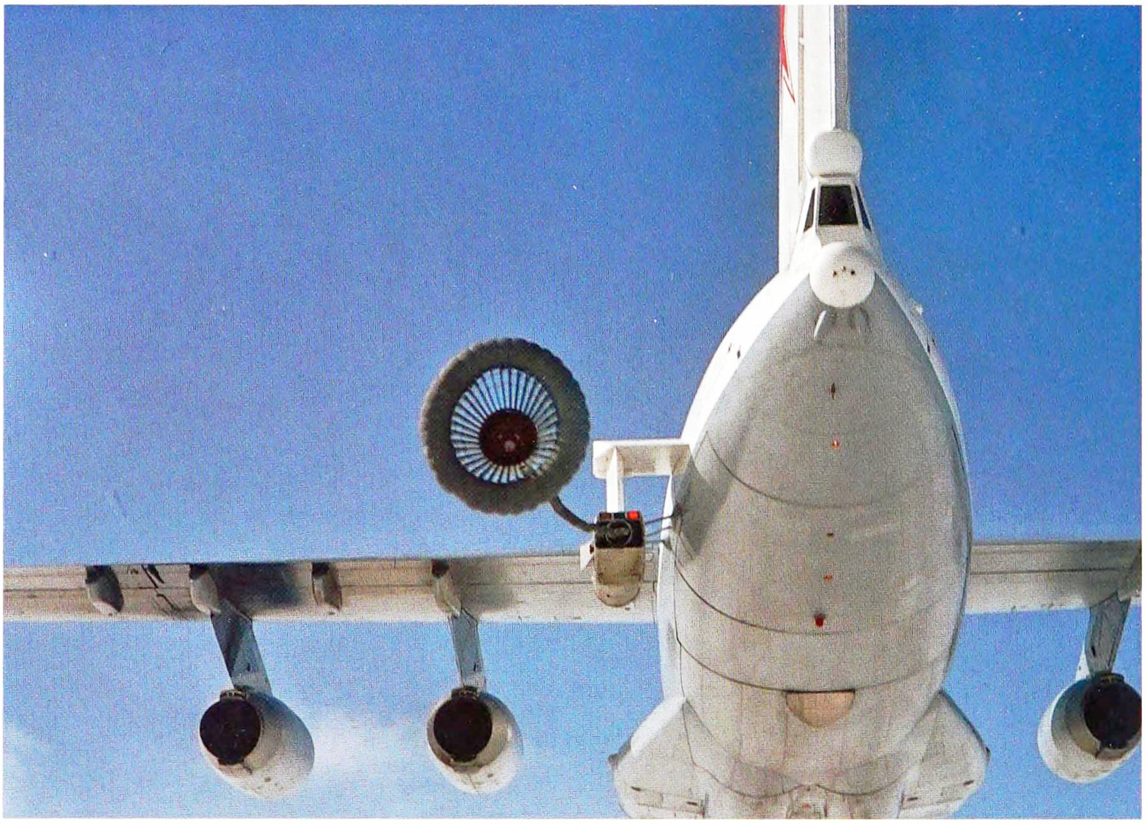
Canadian Armed Forces/4th Wing CF-188s (F/A-18As) intercepted Russian Tu-95MSs on several occasions.

were observed to approach the Russian aircraft, shadowing them for a total of five hours. According to a news item in *The Times*, the military command of Great Britain had to scramble two Panavia Tornado F.3 fighters which escorted the Russian aircraft for 20 minutes, until the latter left the area of the exercise.

On 5th September 2007 a Russian Air Force Tu-95MS approached Canadian airspace approximately 190 km (118 miles) northeast of Tuktoyaktuk, Northwest Territories – allegedly without any prior notification from Moscow. Two CAF/4th Wing CF-188 fighters scrambled from CFB Cold Lake, Alberta, to intercept.



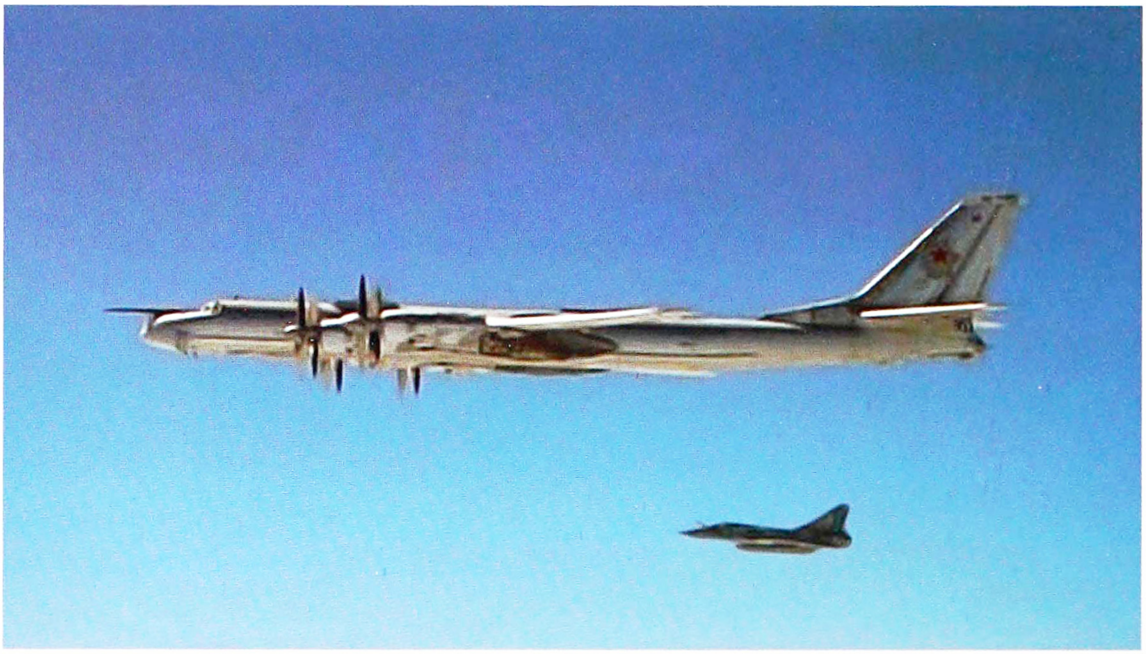




A bomber captain's view of an IL-78M. Note the soot stains on the wings from reverse thrust.

Amid much consternation, Canadian officials lodged a formal protest, citing aggressive actions of Russian combat aircraft near the country's borders. In Moscow, these statements of the Canadian Defence Minister were dismissed; Russian officials declared that the aircraft of the Long-Range Aviation was making a planned flight and the states near whose borders it was to fly had been duly notified of the flight. Besides, NORAD confirmed afterwards that Canadian or US airspace had not in fact been violated by the Russian bomber.

On 6th-7th September of the same year Long-Range Aviation aircraft took off from airfields at Engels, Anadyr', Vorkuta and Tiksi to carry out yet another routine patrol in remote geographical areas. According to Deputy Commander of the 37th Air Army Maj.-Gen. Anatoliy D. Zhikharev, the Tu-160s and Tu-95s flew their missions with no nuclear munitions on board. In the course of the mission, six Russian bombers were intercepted by six F-15s from Elmendorf AFB 50 miles off the north-west coast of Alaska.



Here, 184th TBAP Tu-95MS '27 Red' is escorted by a French Air Force Dassault Mirage 2000 on 9th June 2007.

On 29th November 2007 the USAF's latest F-22A Raptor fighters made their first interception of Russian strategic aircraft – a pair of Tu-95MSs. The Russian 'visitors' were detected at long range by a NORAD radar on Alaska, and the Raptors scrambled from Elmendorf AFB to ward them off. One of the bombers which came close to Alaskan airspace near the Aleutian Islands was intercepted and accompanied for several minutes by two F-22As of the 3rd Tactical Fighter Wing. The uninvited guest on Thanksgiving Day was one of the *Bear-Hs* to have a name – the abovementioned '59 Red' *Blagoveshchensk* from the 79th TBAP.

In 2007, for the first time in the course of 15 post-Soviet years, the yearly flying time logged by pilots of Russia's Long-Range Aviation exceeded 80 hours. According to Commander of the 37th Air Army Maj.-Gen. Pavel Androsov, in that year more than 40 strategic bomber and missile carrier crews received a complete course of training starting from zero, and the plan for combat proficiency training was fulfilled 100%. In 2007 more than 50% of the crews were qualified for participation in air patrols; of these, 30% were accounted for by young crews, said Androsov.

During the very first Long-Range Aviation exercise held in 2008 (in February) more than 70 sorties were made; these included more than 20 sorties by Tu-22M3s which dropped high-explosive bombs on a target range in the Saratov Region. More than 30 Tu-95MS missile-carriers, Tu-22M3 bombers and IL-78 tankers were involved in a two-day tactical flight training exercise of Long-Range Aviation. In one of the flights a section comprising two *Bear-Hs* approached a US Navy carrier task force in the Pacific; one of the bombers flew over the CTF's flagship, the aircraft carrier USS *Nimitz*, at a height of 610 m (2,000 ft). USAF and JASDF fighters were scrambled to intercept the Russian aircraft.

The Pentagon and NATO voiced their concern, saying that the Russian Long-Range Aviation's pattern of actions resembles the one practiced during the Cold War years. Maj.-Gen. Pavel Androsov commented this as follows: *'We have flown, are flying and* ***will*** *fly to whatever areas that we deem necessary for the training of our pilots'*.

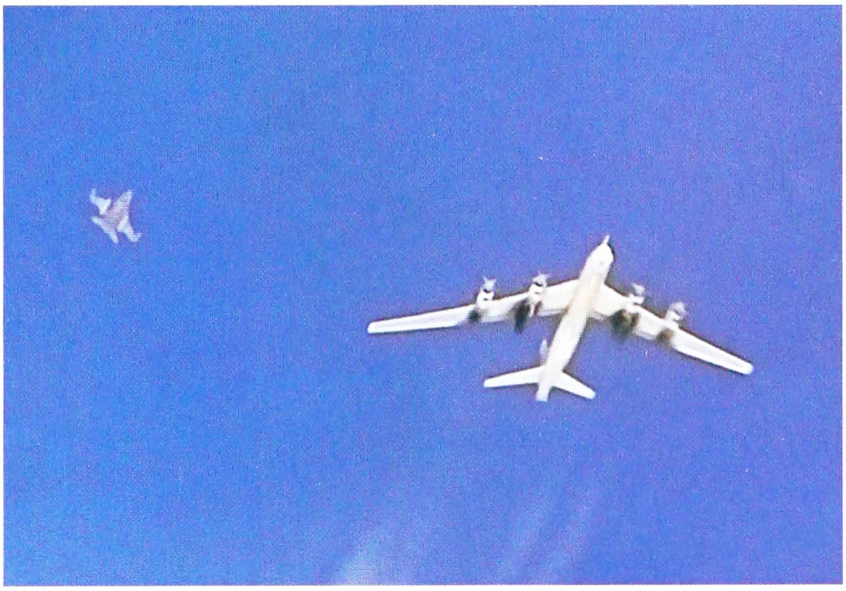
On 9th February 2008, no fewer than 24 JASDF aircraft, including F-15J Eagles and a Boeing E-767 AWACS, scrambled and gave 'a notice, then a warning and another notice and warning' as a Russian Tu-95 allegedly violated Japanese airspace by making a three-minute flyover of Sofugan in the Izu Islands. Again, Japan issued a strong diplomatic protest to the Russian Embassy in Tokyo, demanding prevention of future incursions. Yet, while conceding that four Tu-95s had flown a 10-hour mission over the Pacific that day, Russian officials denied the border incursion.

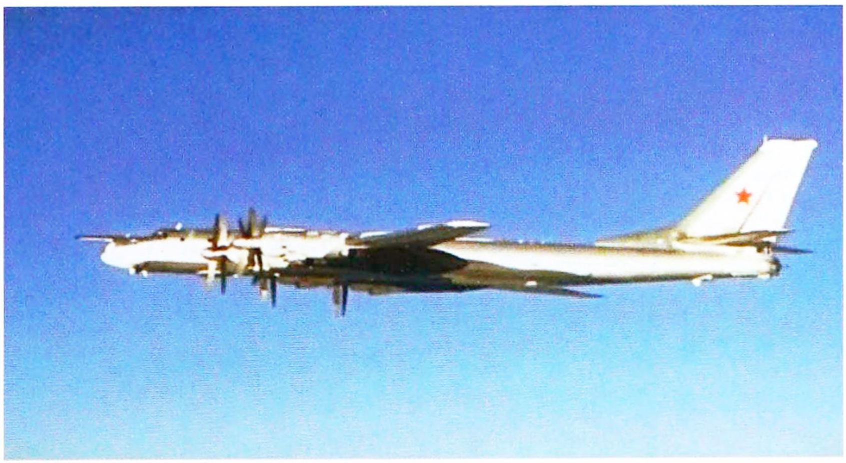
On 9th June 2007 a pair of 184th TBAP Tu-95MSs performing a routine air patrol over the Arctic regions were intercepted by French Air Force fighters on a two-month temporary deployment to Iceland as part of Operation *Air Islande-2008*. Two of the four Mirage 2000s on temporary deployment to Keflavik scrambled after the radar of the NATO Air Operations Center detected two approaching unidentified aircraft. They followed the missile carriers at a safe distance for approximately an hour and a half. The French military informed that the fighters established visual contact with the 'objects' 220 km (136 miles) from the island.

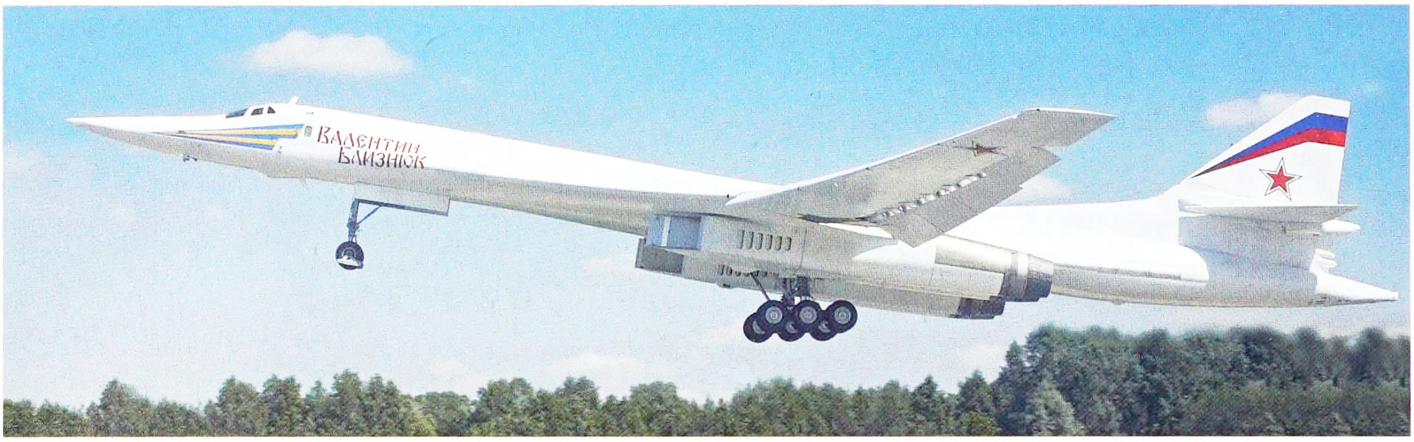
On 16th April 2008 a special search and rescue training session was held at Tiksi-3 AB within the framework of yet another com-

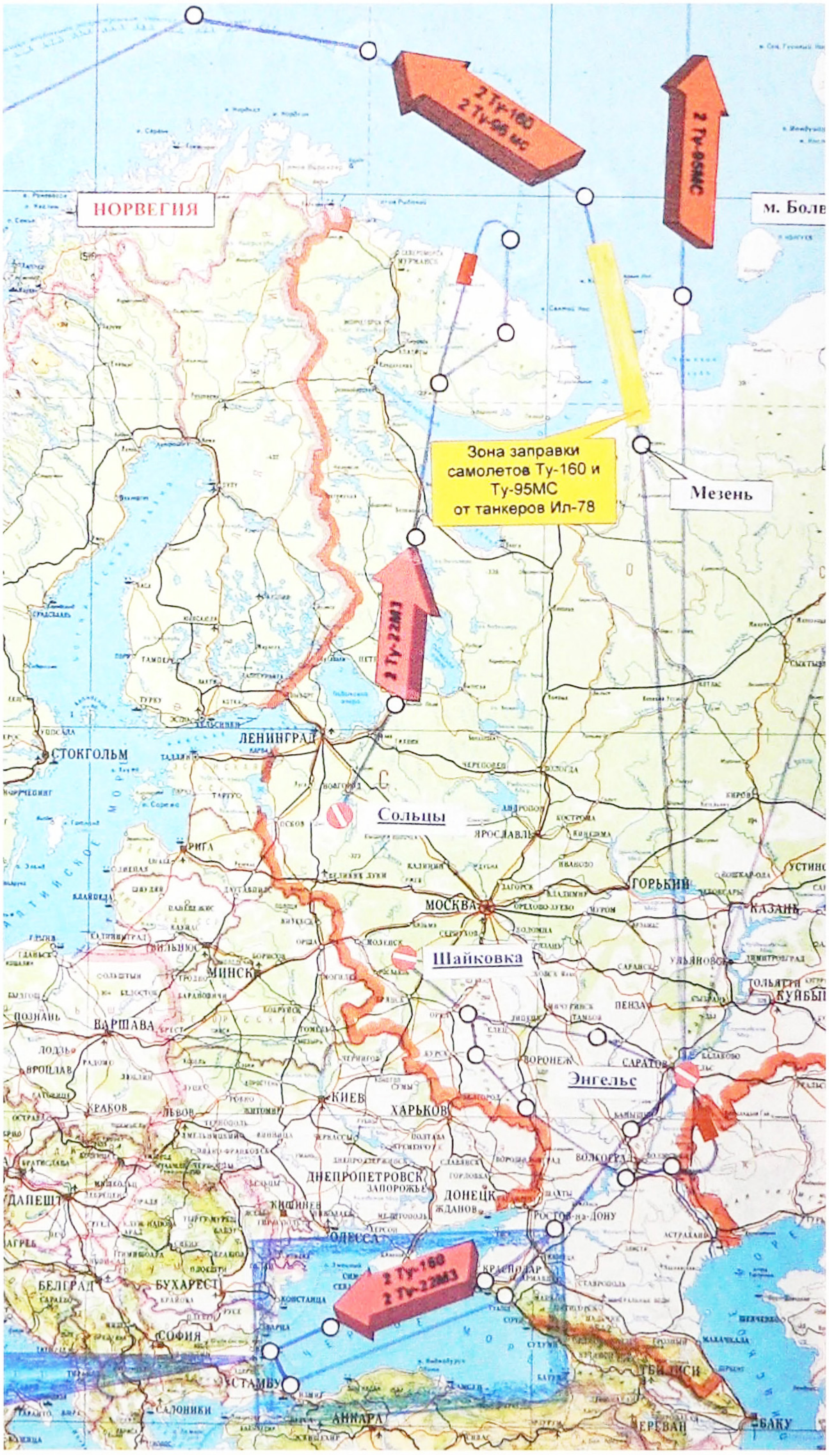
Below: A Tu-95MS is intercepted over international waters during an exercise.

Bottom: One of the *Bear-Hs* that caused a commotion in Japan on 9th February 2008.






Валентин Близнюк


2 Ту-160
2 Ту-95 МС
2 Ту-95МС
НОРВЕГИЯ
м. Боле
Зона заправки самолетов Ту-160 и Ту-95МС от танкеров Ил-78
Мезень
2 Ту-22М3
СТОКГОЛЬМ
ЛЕНИНГРАД
Сольцы
МОСКВА
Шайковка
Энгельс
2 Ту-160
2 Ту-22М3

Tu-160 '19 Red' *Valentin Bliznyuk* departs Engels on a routine mission.

Part of a map of a Long-Range Aviation exercise involving 121st GvTBAP Tu-160s, 184th TBAP Tu-95MSs and 200th GvTBAP Tu-22M3s.

mand/staff exercise supervised by 37th VA Commander Maj.-Gen. Pavel V. Androsov. An An-12 transport was used to locate a 'downed' Long-Range Aviation crew by picking up the signal of the emergency radio beacon with its radar and homing in on the crash site. Next, two Mil' Mi-8MT helicopters were directed to the scene to pick up the 'crew in distress'.

On 8th-9th July 2008 four *Bear-Hs* from Ookraïnka AB flew a routine 14-hour air patrol mission over the Arctic and Atlantic Oceans. Shortly afterwards, on 20th July, the crews of strategic missile carriers performed lengthy flights along predetermined routes over international waters in a north-westerly direction. Two 184th TBAP Tu-95MSs, having taken off from a northern tactical airfield, executed a 13-hour mission over the Norwegian Sea before landing at their home base in Engels. Two Tu-160s of the 121st TBAP departed from Engels-2 AB, flying an 11-hour mission near Greenland and then returning to base. Meanwhile, other aircraft of the same division were engaged in IFR training, receiving fuel from IL-78 tankers. That day the DA's flight training took place at Engels, Ryazan' (Dyagilevo AB), Ookraïnka AB and Irkutsk. The entire flying personnel – from lieutenants to generals – took part in the flights. For instance, one of the Tu-22M3 bombers operating from Ryazan' was captained by Lt.-Gen. Igor' I. Khvorov, Chief of the General Staff of the Russian Air Force.

When Georgia attacked South Ossetia without warning on the night of 8th/9th

August 2008, Russia intervened resolutely to stop the aggression. The Russian Air Force assets used in the five-day war included several Tu-22M3s from the 52nd TBAP toting conventional bombs. Tragically, one of the *Backfire-Cs* was shot down on the night of 9th August by the Georgian air defences, using a Buk-M1 surface-to-air missile system which Georgia had acquired from the Ukraine shortly before the conflict. In the course of four days the Russian bombers hit several targets on Georgian territory, bombing the vicinity of the town of Gori, an ammunition depot near Rustavi, the Georgian Air Force bases at Vaziani, Senaki and Marneuli; they also bombed a Georgian troop convoy moving towards South Ossetia and suppressed Georgian positions in the Kodori Gorge. However, free-fall bombs were used for this purpose, not precision-guided munitions. The Tu-22M3 crews' level of training was subsequently assessed as high by the Russian Armed Forces' General Staff.

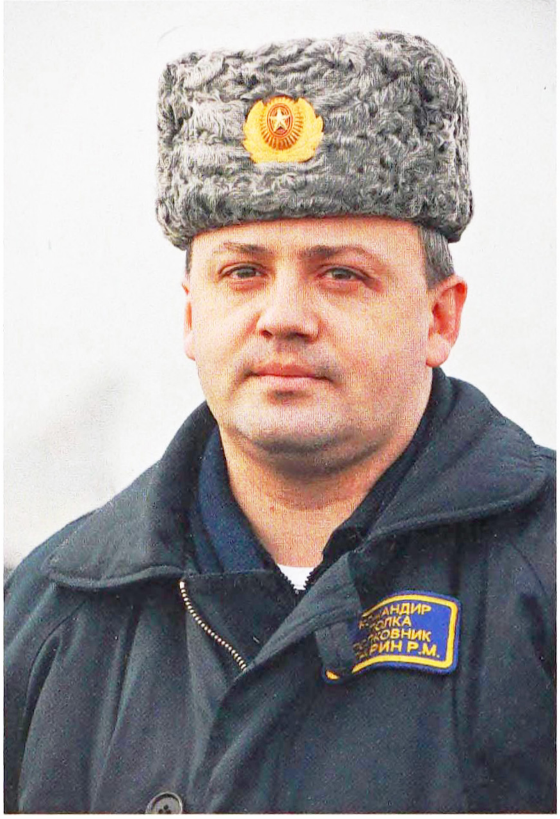
The loss of the *Backfire* in the Georgian war deserves a more detailed account. On the night of 9th August, two flights of Tu-22M3s bombed Georgian Army convoy on the march towards the border of South Ossetia, among other objectives.

No doubt the task posed by the higher command to the unit was prepared haphazardly, to say the least. No preliminary reconnaissance of the objectives and their air defences had been carried out. Nevertheless, the bomber crews began fulfilling their mission at an altitude of 6,000 m (19,685 ft). As the author of one news item dealing with the shootdown snidely put it, *'using such aircraft* (supersonic long-range missile carriers – *Auth.*) *to raid an army convoy was tantamount to driving nails with a microscope'*; Sukhoi Su-25

A Royal Norwegian Air Force/332 Sqn F-16A escorts a Tu-160 over the Norwegian Sea.

An RAF Tornado F.3 wards off a high-flying *Blackjack* in 2007.

Two more views of the same encounter; the Tu-160 is '07 Red' *Aleksandr Molodchiy*.



52nd GvTBAP CO Col. Roman M. Oparin, who led one of the *Backfire* flights on the night of the shootdown.

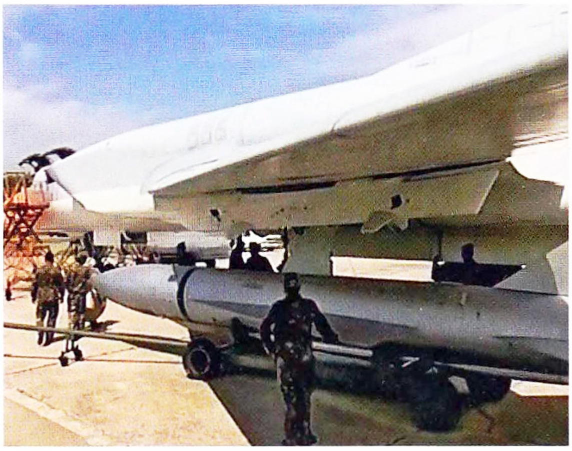
attack aircraft or Su-24M tactical bombers were much better suited for this work. Unexpectedly for the Russians, the Georgian convoy included army air defence assets – the abovesaid Buk-M1 self-propelled SAM systems; apparently they were manned, at least in part, by Ukrainian personnel who were more familiar with the hardware. Several missiles were fired and one of them scored a direct hit on the left-hand aircraft in one of flights (a source says the missile went straight into the open bomb bay, blowing the machine apart). The wreckage fell near the Georgian village of Kareli. The pellets in the missile's warhead killed the back-seaters (navigator Maj. Viktor Pryadkin and WSO Maj. Igor' Nesterov) outright; the co-pilot (Maj. Vyacheslav Malkov) ejected safely but the captain (Aleksandr Koventsov) did not eject for reasons unknown and was killed. Malkov was taken prisoner by the Georgians. As he parachuted earthwards, his landing was rather unfortunate – he sustained a spinal injury and broke an arm; therefore he was given medical treatment in the local hospital and subsequently moved to a better equipped hospital in Tbilisi.

Part of the wreckage – the cockpit section, three ejection seats and a canopy door – fell on South Ossetian territory. The search and rescue effort mounted by the Russians was hampered by the hilly terrain; a whole month passed before the Army SAR team finally located the fragments. On the morning of 9th September, Russian Border Guards personnel stumbled upon one of the ejection seats. The number stencilled on it identified it as the captain's seat. The seat had functioned as it should, which was proved by the drogue parachute discovered at the right distance from the seat. If the ejection had been unsuccessful, the body of the pilot would have lain between the seat and the parachute, but there was no body. The main wreckage, a twisted mass of metal, was found on the border between South Ossetia and Georgia, 2 km (1.24 miles) from Mt. Shvil'gisi. Among the wreckage were the remains of two bodies.

On 19th August Maj. Vyacheslav Malkov was returned to Russia during an exchange of prisoners of war. On 16th September, the Georgians handed over to the Russian military the bodies of the two Russian airmen killed in the shootdown.

The story of the *Backfire* shootdown looked fishy from the very start of the war. The Russian MoD's Deputy Chief of General Staff Col.-Gen. Anatoliy A. Nogovitsyn declared at a press briefing that the Russian jets brought down by Georgian air defences included *'a Tu-22 performing a reconnaissance mission'*. Knowing that only two versions of the Tu-22M are in service with four regiments of the DA, the journalists logically assumed that the aircraft in question was a Tu-22MR specialised reconnaissance aircraft ('36 Red') belonging to the Russian Air Force's 929th GLITs in Akhtoobinsk. (The only first-line DA unit to operate the version is the 444th TBAP at Vozdvizhenka AB, but that is in the Russian Far East, as far from the war zone as you could get. However, a single Tu-22MR is known to be assigned to the Akhtoobinsk test centre, which is quite close to the North Caucasus.)

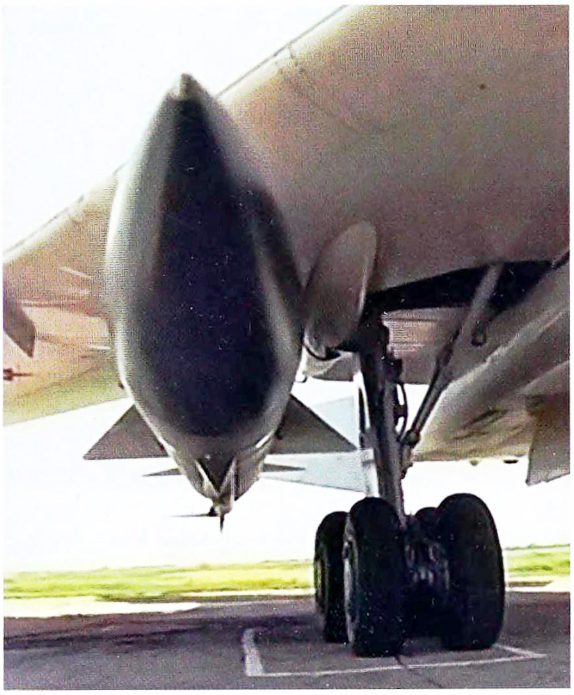
The wreckage of the Tu-22M3 shot down over Kareli, Georgia, on 9th August 2008.

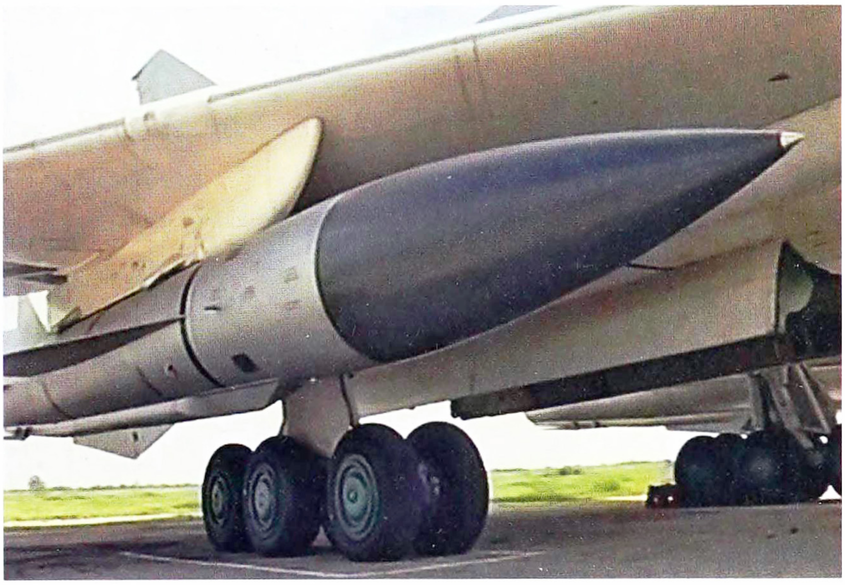


A Tu-22M3 being readied for a missile strike mission.

A Kh-22NA low-altitude missile ready for hooking up to a *Backfire-C*.

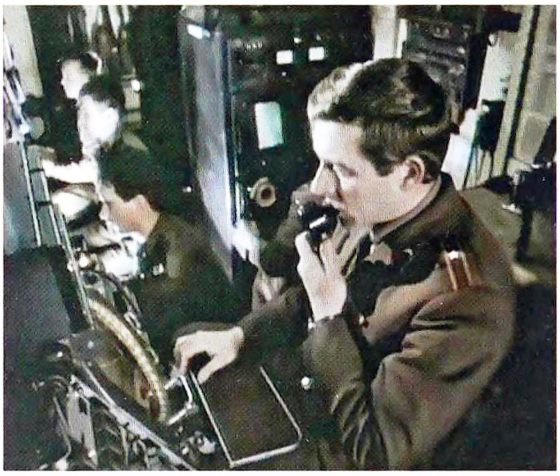
A Kh-22N under the starboard wing of a Tu-22M3.





This Tu-22M3 is fitted with BD-45K pylons under the wing gloves and MBD3-U9M-0 MERs under the air intake trunks, illustrating the *Backfire-C*'s ability to carry missiles and bombs simultaneously.

The pilots and (below) navigator and WSO of a *Backfire* at work.



Right row: The air traffic controllers and ATC shift supervisor at a DA base's control tower.

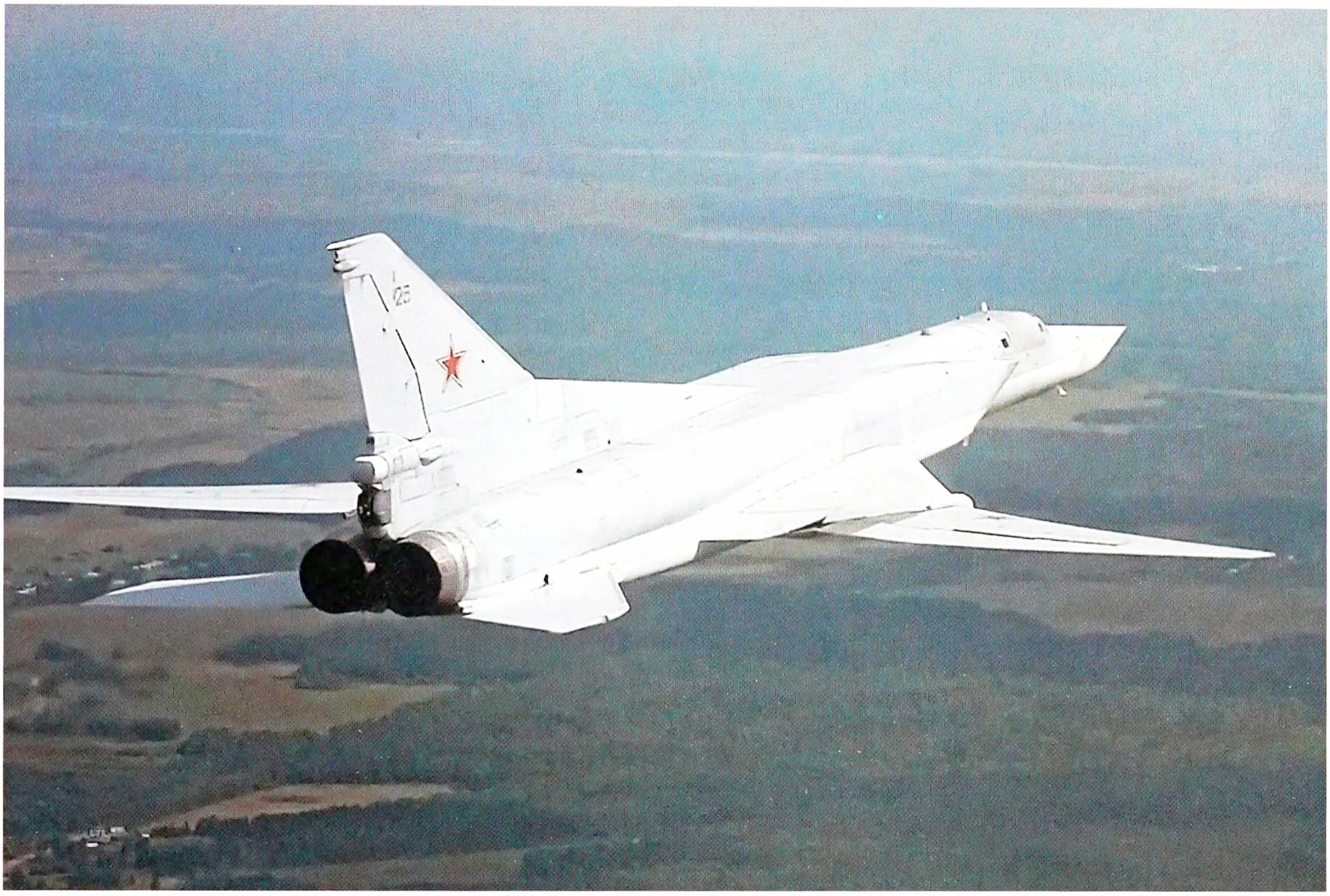
A 840th TBAP Tu-22M3 climbs away steeply from Sol'tsy AB with the ATC radar in the foreground.

Only later was it revealed that the aircraft was in fact a standard bomber belonging to the 52nd TBAP based at Shaikovka AB.

The families of the Tu-22M3's crew members were likewise in the dark as to the fate of the airmen for a while. We'll let the widow of Igor' Nesterov, the navigator, tell the story.

'Igor' went off on combat duty on 8th August, it was a normal assignment on the duty roster. At night I sent him a text message: "Where are you? When will you be coming home?" The reply came at 6.30 in the morning. "We're having an exercise", Igor' wrote.

A Tu-22M3 cruises over the Russian countryside during a practice mission.



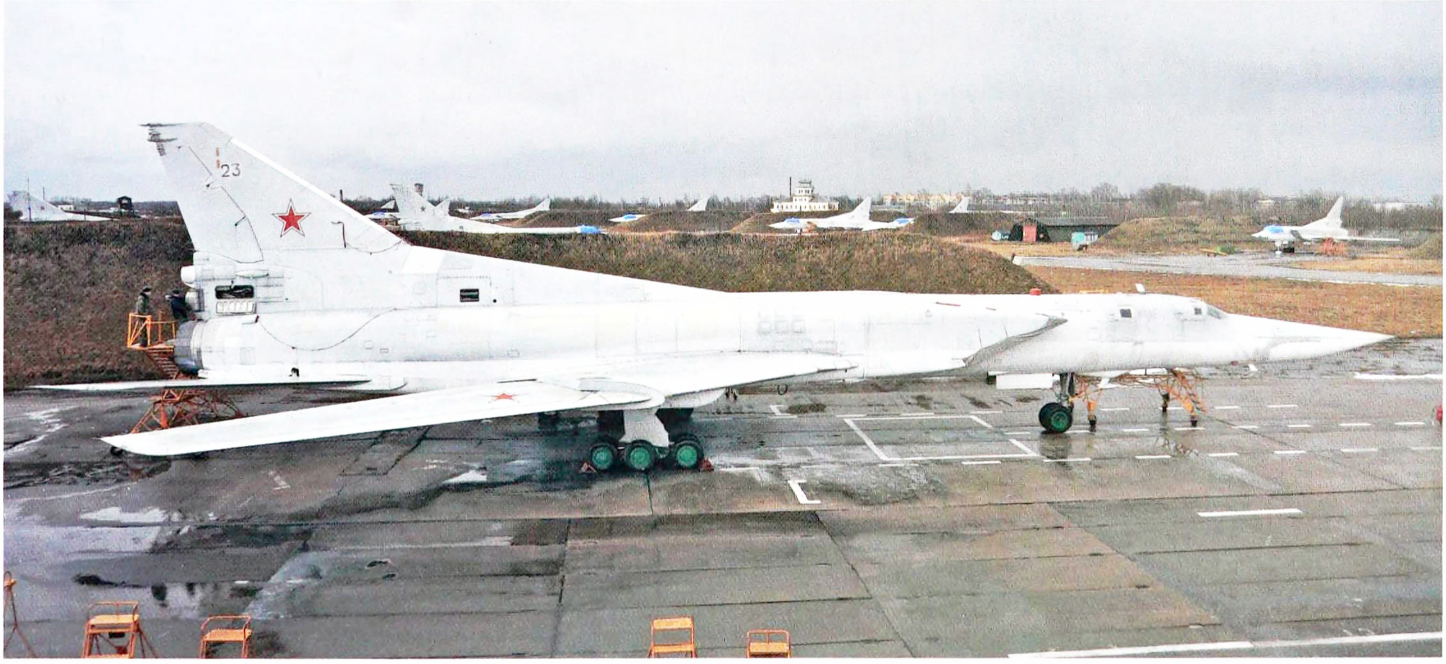
I realised what sort of "exercise" it was and where it was as soon as I saw the morning news on TV. Time and again I called Igor's mobile number. But all I got for the millionth time was, "The subscriber's phone is switched off or out of coverage".'

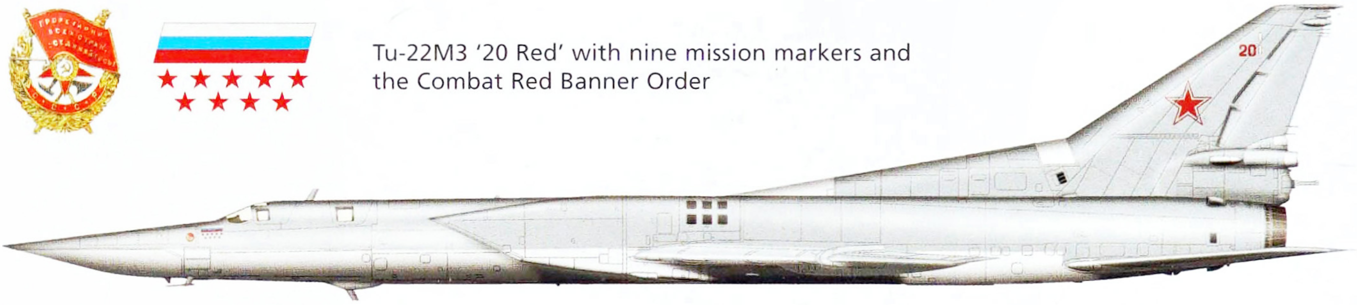
In the middle of day on 9th August, the regiment's command informed the families that Igor' Nesterov's aircraft had been shot down. And not a word about the fate of the pilots.

'The TV set stayed on all day and night; I surfed the Internet for hours on end, trying to find any information – Larisa Nesterova recalls – *We heard on the news that 12 Russian officers were in captivity in Georgia. But the mili-*

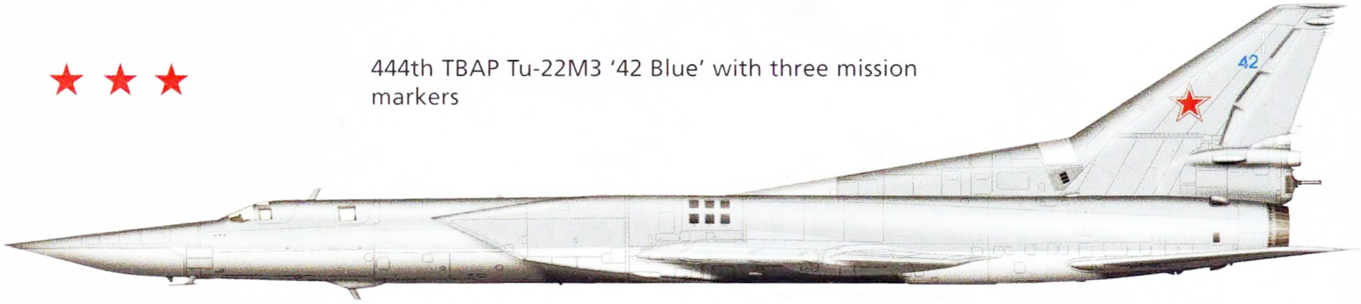
Another aspect of the same Tu-22M3 ('28 Red').

The tail cannon barbette of 840th TBAP Tu-22M3 '23 Red' receives attention at Sol'tsy AB.

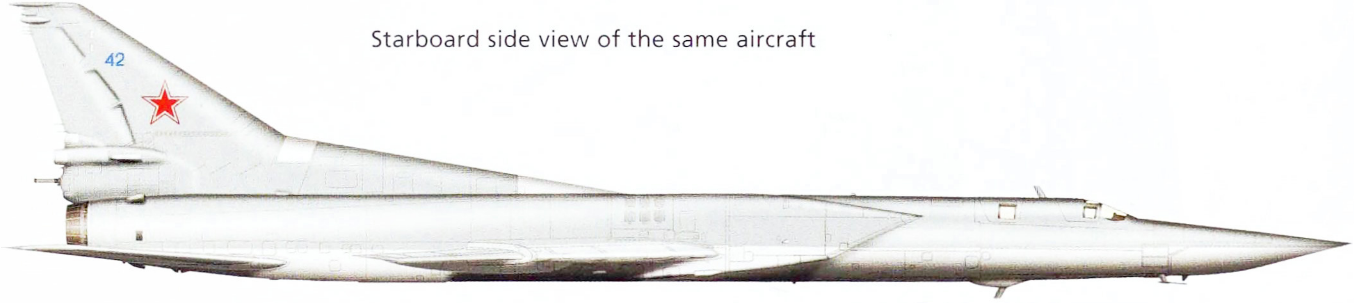




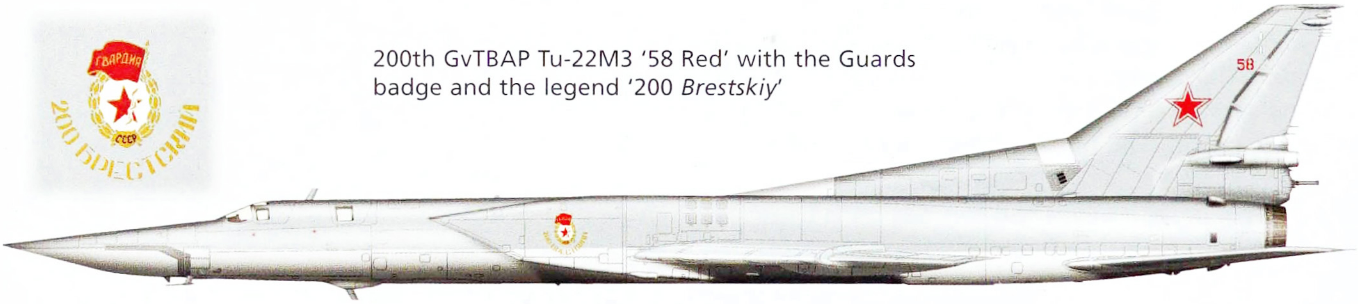
Tu-22M3 '20 Red' with nine mission markers and the Combat Red Banner Order



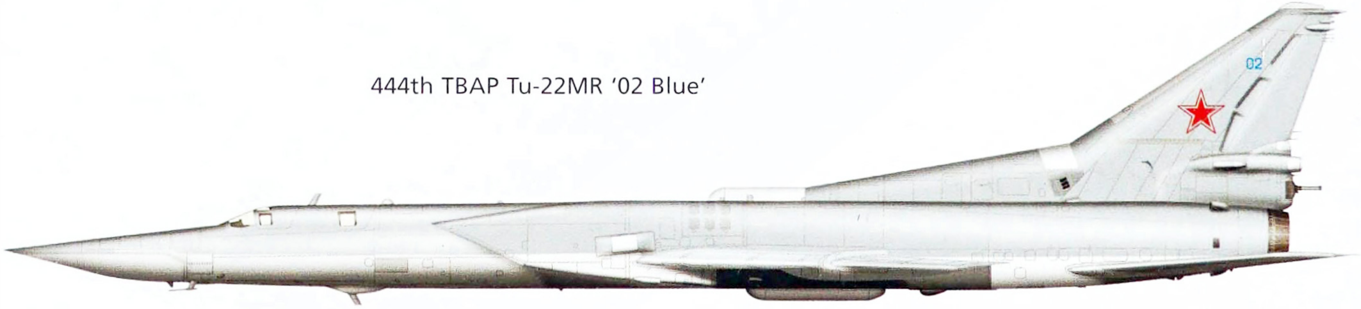
444th TBAP Tu-22M3 '42 Blue' with three mission markers



Starboard side view of the same aircraft



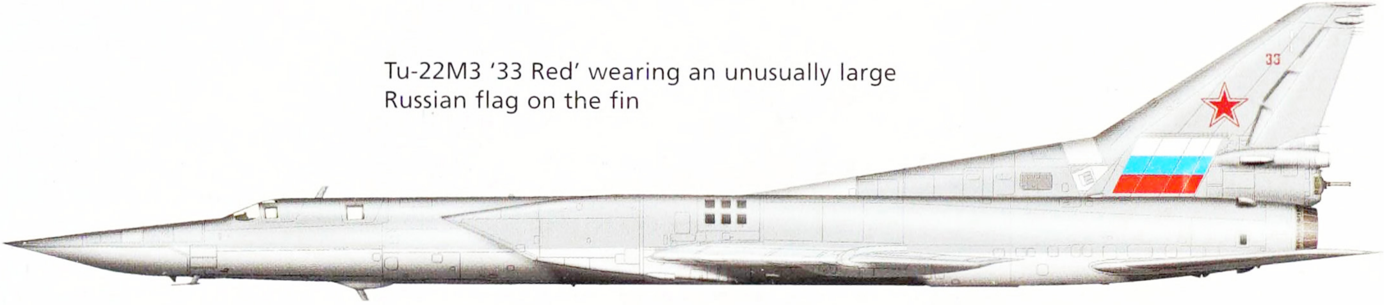
200th GvTBAP Tu-22M3 '58 Red' with the Guards badge and the legend '200 *Brestskiy*'



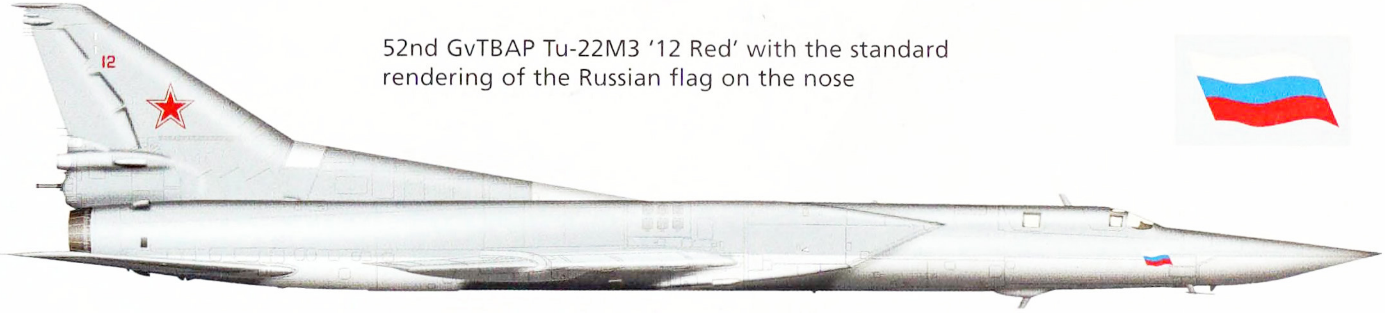
444th TBAP Tu-22MR '02 Blue'

tary did not state any names. We hoped that Igor was among the POWs. A few days later Georgia handed over to Russia only five POWs. Igor was not among them.

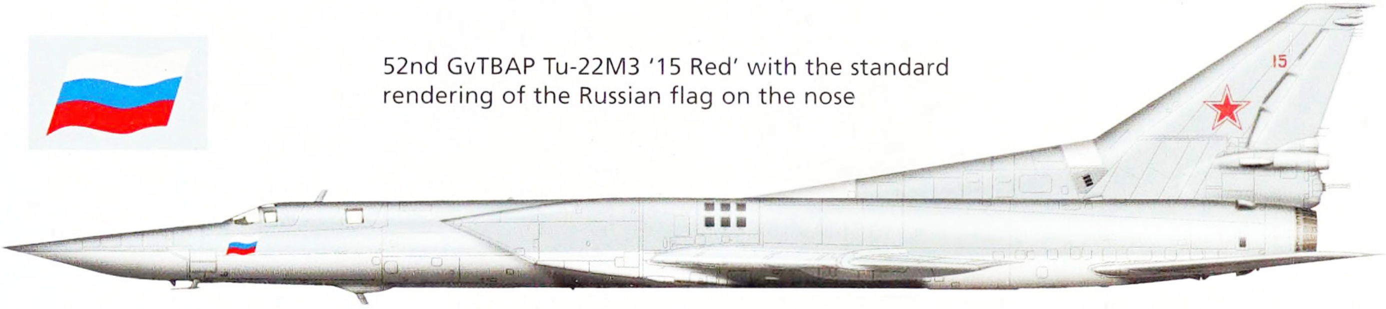
It was not until 15th August that the wife of another officer found information in somebody's blog that someone had seen four parachutes [at the scene of the shootdown].'



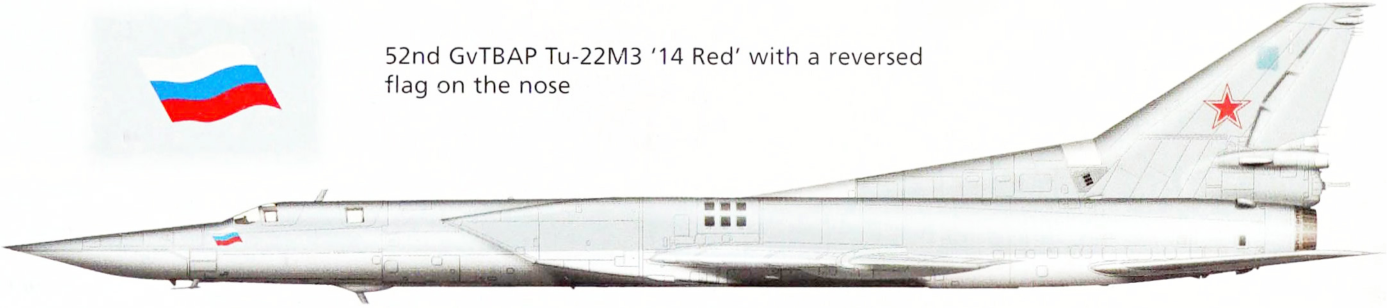
Tu-22M3 '33 Red' wearing an unusually large Russian flag on the fin



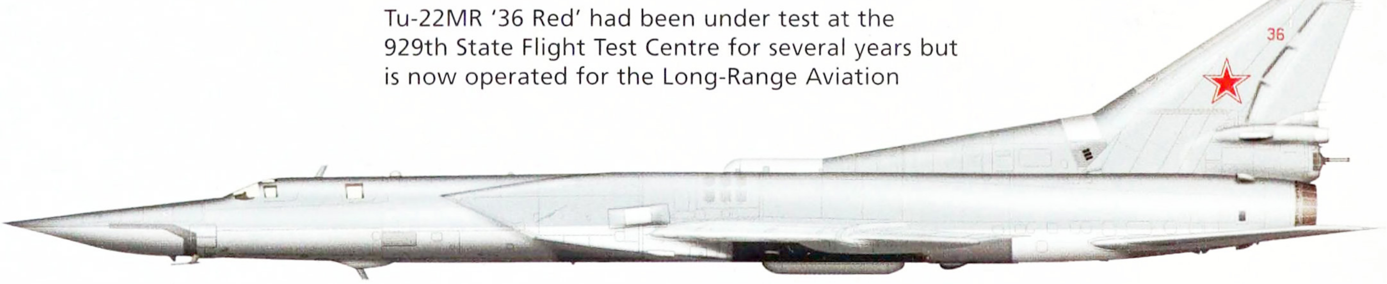
52nd GvTBAP Tu-22M3 '12 Red' with the standard rendering of the Russian flag on the nose



52nd GvTBAP Tu-22M3 '15 Red' with the standard rendering of the Russian flag on the nose



52nd GvTBAP Tu-22M3 '14 Red' with a reversed flag on the nose

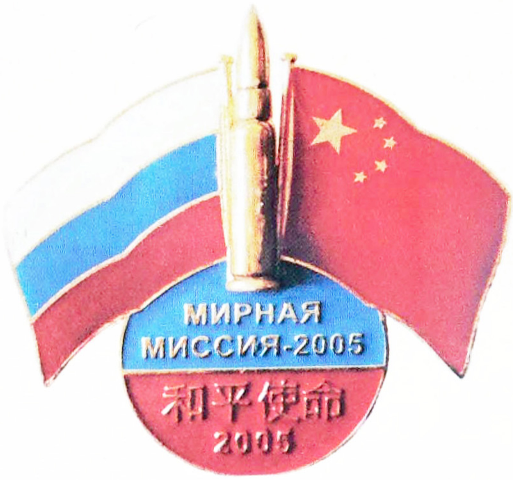


Tu-22MR '36 Red' had been under test at the 929th State Flight Test Centre for several years but is now operated for the Long-Range Aviation

'This means Igor' is alive!' – Larisa thought hopefully. All she could do was wait and pray.

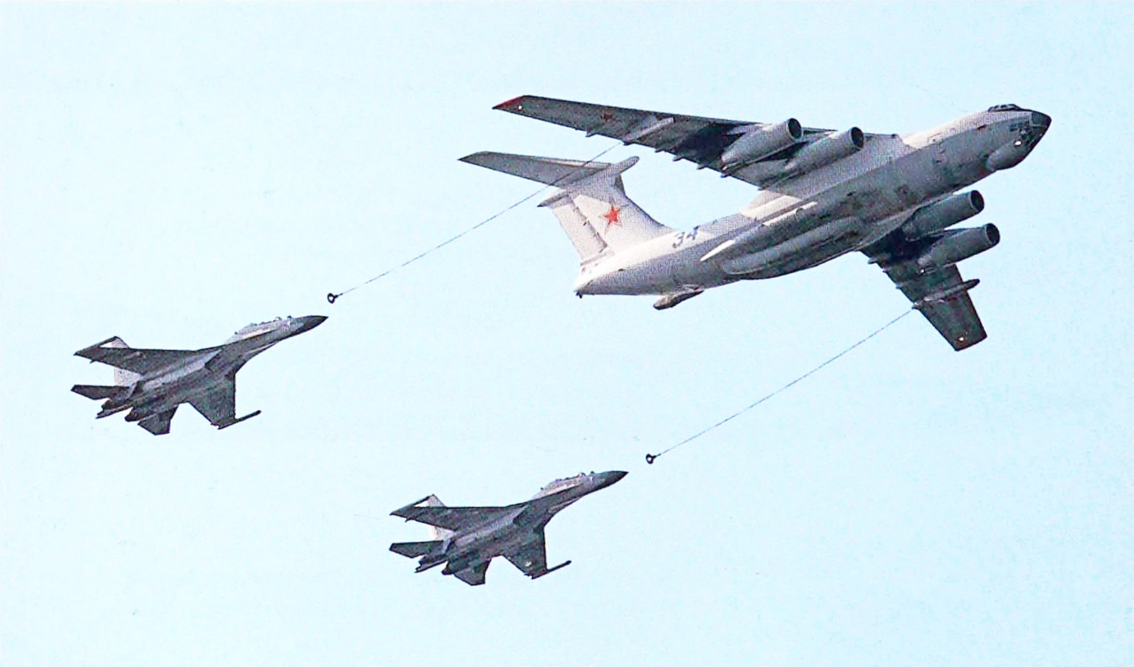
'On 23rd August we celebrated my husband's 42nd birthday – Larisa Nesterova continues – *but for the first time in our family he was absent at his own birthday celebration. And then, on the fortieth day after the shootdown, we read on the Internet that the*

A badge worn by the Russian Air Force and Chinese People's Liberation Army Air Force (PLAAF) personnel taking part in Exercise *Peace Mission 2005*.

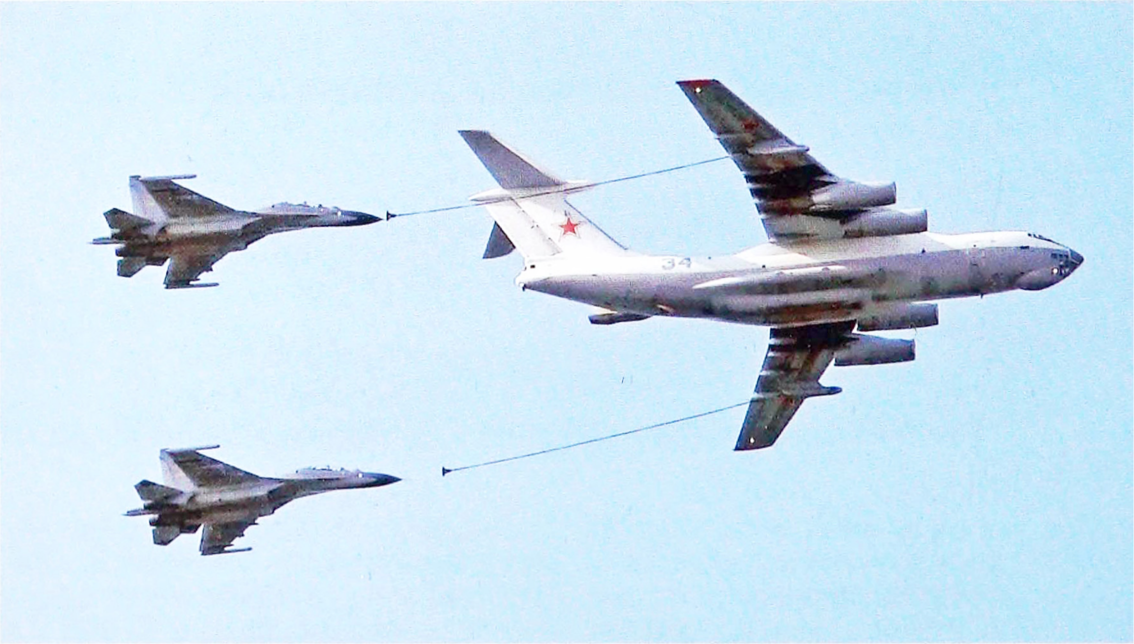


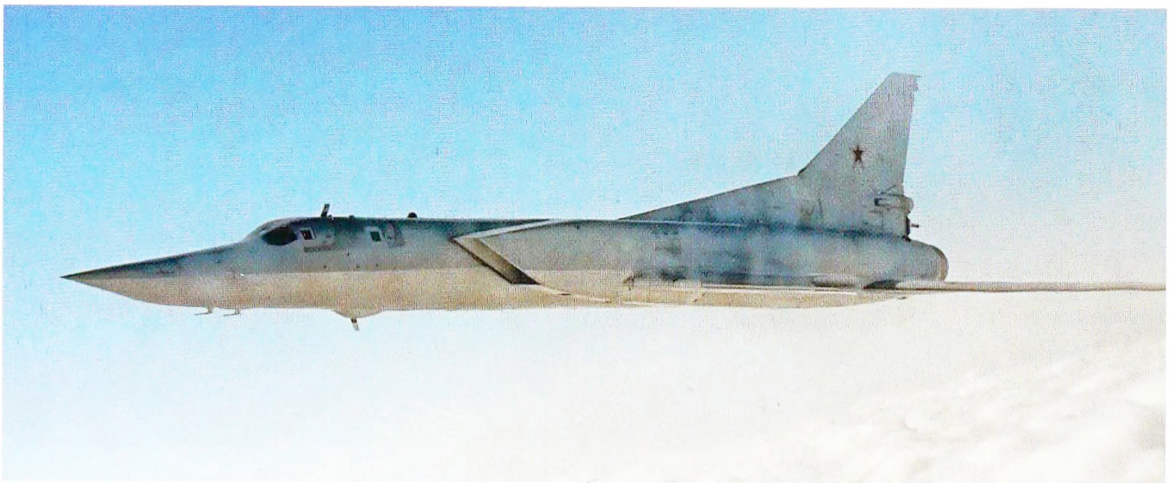
Russian SAR team had found the aircraft in the mountains on the Georgian/South Ossetian border. That same day we received a call from the Air Force command: they said that the remains of two bodies had been found at the navigator's workstation, at the back of the aircraft (sic)… they had sent them to Rostov for examination…' (There was an eerie aspect to this time frame. In Russian Orthodox Church tradition, the 40th day is the day when the soul of the newly deceased is admitted to Heaven.)

During four days of the brief war, which was referred to in Russia as an 'operation to compel Georgia to peace', the crews of the 52nd TBAP had flown more than 50 sorties,



Here, IL-78 '34 Blue' (the one that had been to China in 2000) formates with two PLAAF Su-30MKK fighters during *Peace Mission 2005*.





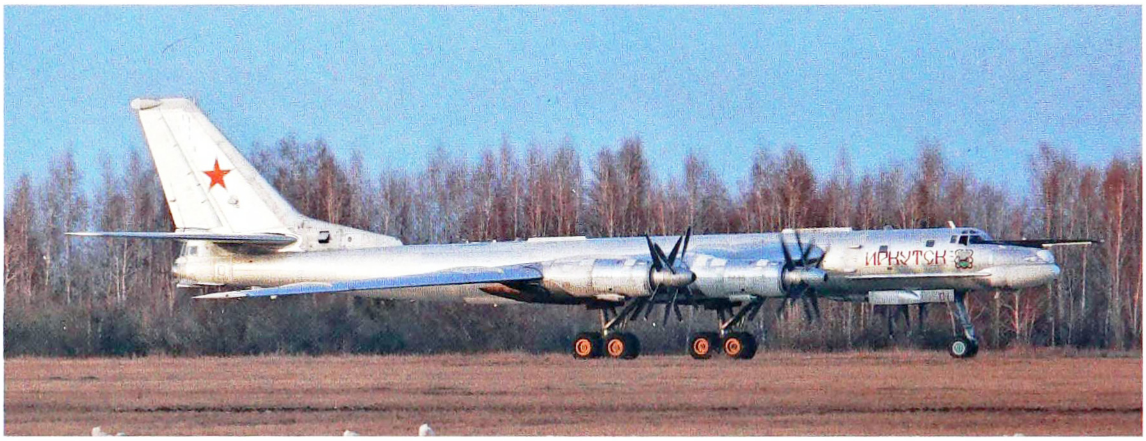
A Tu-22M3 cruises over thick overcast on 22nd August 2005.

52nd GvTBAP Tu-22M3 '15 Red' taxies at Shaikovka.

which equals two or three sorties per aircraft per day. Bomb strikes were delivered from high altitude, the aircraft approaching the target in close combat formation from different directions, with a short bombing run and the use of active/passive ECM. The chosen mode of action made it possible to use the Tu-22M3's combat capabilities rationally, providing the surprise factor and increasing the efficiency of air defence penetration (with respect to short-range and man-portable SAMs). The best results were attained when attacking the troop concentration in the Kodori Gorge. However, the chosen tactics did not provide the greatest possible combat efficiency. The use of 'dumb' bombs forced the bombers to enter the enemy air defence assets' kill zone. Also, the lack of an effective modern ECM/ESM suite reduced the chances of survival in an active air defence environment. The standard ECM system fitted to the Tu-22M3 did not provide analysis of the registered electromagnetic pulses of the adversary's electronic systems, nor did it provide automatic jamming of the Soviet-manufactured S-125, Buk (Beechwood), Osa (Wasp) and Tor (Toroid) SAM systems, which could be neutralised by the crew only in manual mode. The most effective tactic against medium-range SAMs was to stay out of the missiles' reach and, if fired upon, to perform evasive manoeuvres coupled with ECM.

In September 2008 a pair of 121st GvTBAP Tu-160s visited Venezuela; this extraordinary event is dealt with separately in Chapter 7. In the course of Exercise *Stabilnost'-2008* (Stability-2008) held in the Autumn of that year, for the first time since the dissolution of

182nd GvTBAP Tu-95MS '01 Red' *Irkutsk* taxies in at Ookraïnka AB; the Nos. 1 and 4 engines are shut down to save fuel.



An atmospheric sunset shot of a Tu-134UBL that has brought command staff to Belaya AB.

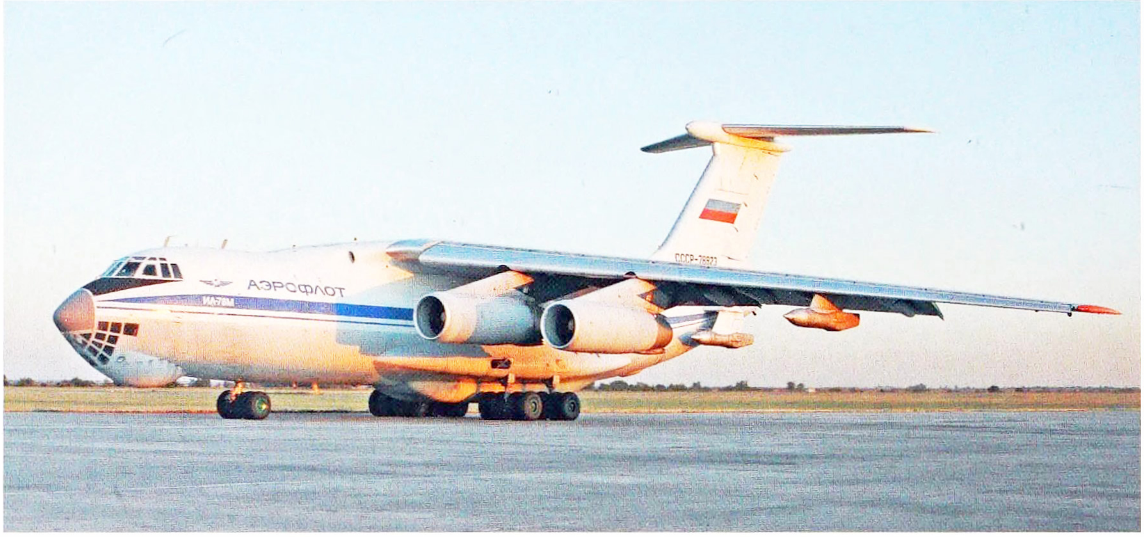
A Tu-22M3 ('17 Red') returns to base at sunset. The object 'underneath' is a mobile searchlight beyond the taxiway.

Tu-95MS '23 Black' taxies to its hard-stand after a Winter evening sortie.

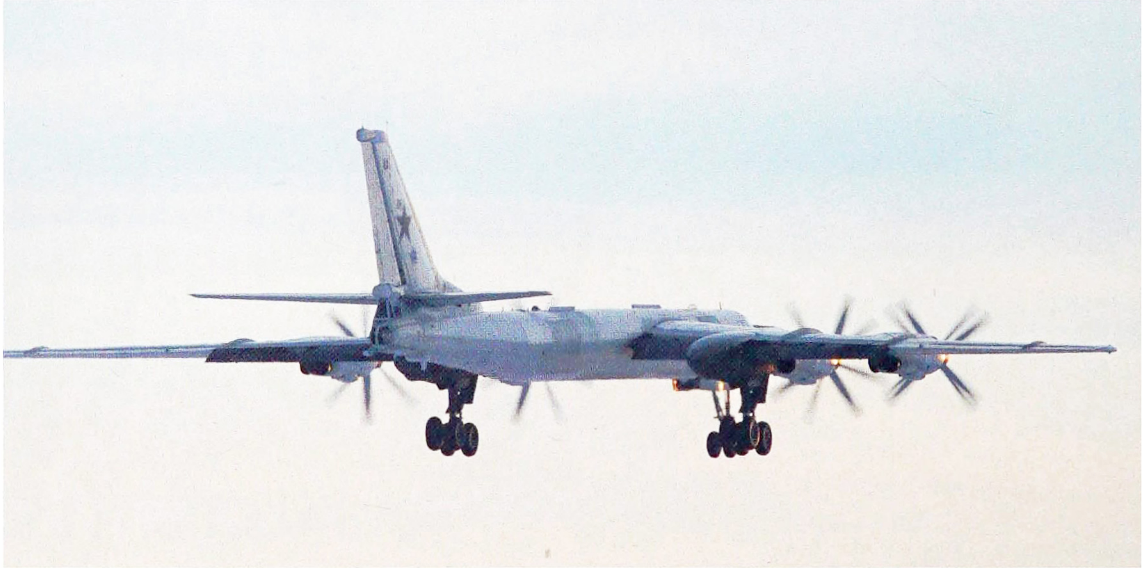
A *Bear-H* lands at Dyagilevo AB in the last rays of the setting sun.

IL-78 '34 Blue' taxies out at Dyagilevo AB for a night flight.

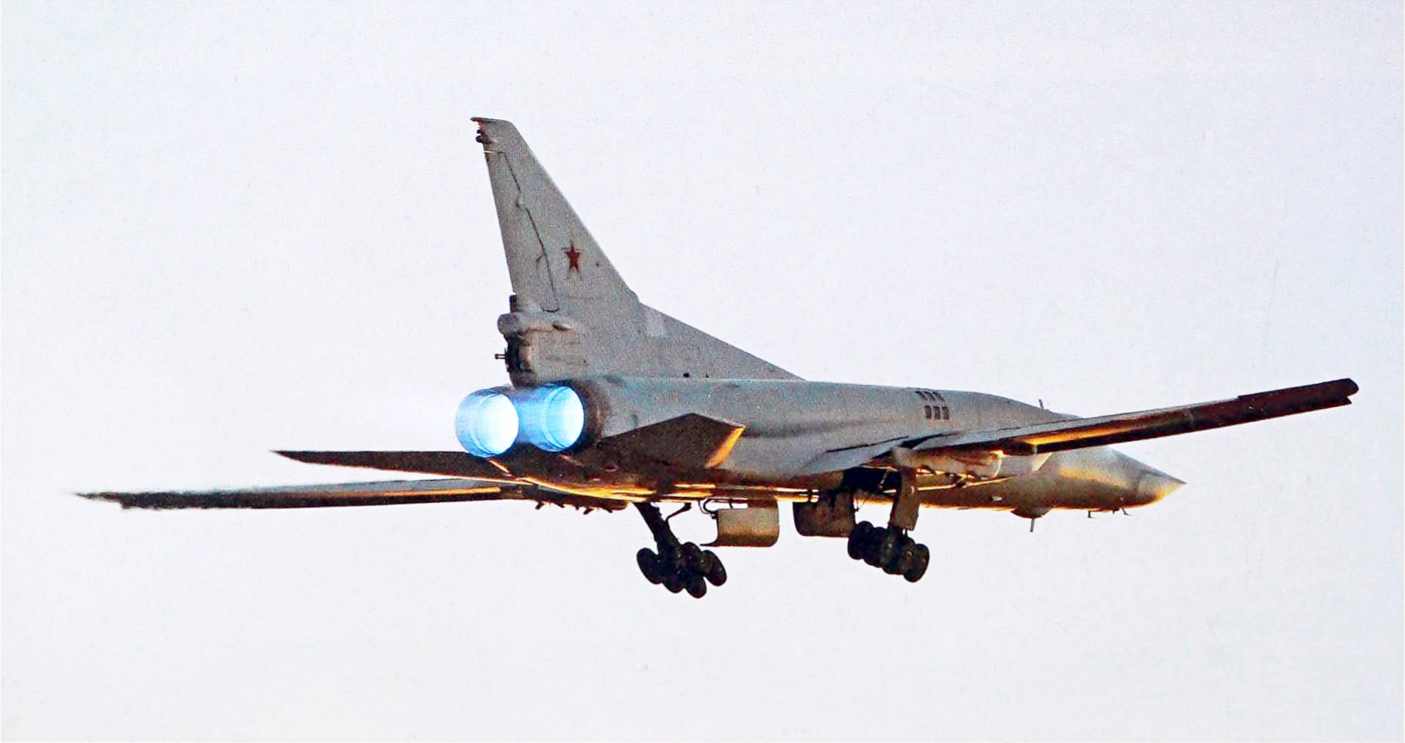
Oddly, IL-78M CCCP-78823 still wears the old Soviet nationality prefix along with the Russian flag.



A Tu-95MS takes off in the late afternoon. Gear retraction was often somewhat delayed.



Belching blue flames, a Tu-22M3 departs on a late-afternoon mission.



the Soviet Union a full complement of Kh-55 cruise missiles was successfully launched by each participating bomber.

On 28th January 2009 a pair of Tu-95MSs performed a ten-hour flight in the vicinity of Alaska. 10th and 11th February saw two crews from the same base (Ookraïnka AB) fly a routine long-range air patrol; the route lay above international waters of the Arctic Ocean towards the Aleutian Islands.

In an eerie flashback of the September 2007 incident, a pair of Russian Air Force Tu-160s was intercepted by CAF fighters just outside the Canadian Arctic on 18th February 2009 – again allegedly without any prior notification from Moscow. The incident took place less than 24 hours before US President Barack Obama was due to visit Canada on his first foreign trip. Canadian Prime Minister Stephen Harper said on 27th February that *'Canada will not tolerate Russian intrusions into Canadian airspace. I have expressed at various times the deep concern our government has with increasingly aggressive Russian actions around the globe and Russian intrusions into our airspace* – the Prime Minister said at a news conference in Saskatoon – *This government has responded every time the Russians have done that. We will continue to respond; we will defend our airspace.'* In Moscow, these statements and those of the Canadian Defence

A sunset scene at the 121st GvTBAP dispersal at Engels.

Afterburners blazing, a Tu-160 accelerates down the runway, leaving a characteristic pall of orange efflux.

The end of a working day at the tanker unit at Dyagilevo AB.

Minister Peter MacKay were dismissed as 'a farce'; Russian officials declared that the aircraft of the Long-Range Aviation was making a planned flight and the states near whose borders it was to fly had been duly notified of the flight. Besides, NORAD confirmed afterwards that Canadian or US airspace had not in fact been violated by the Russian bomber.

In early September 2009 two Tu-95MSs, again outbound from Ookraïnka AB, flew a patrol mission that took them over international waters of the Pacific via the Arctic Ocean. The crews honed their skills of navigating over textureless areas. In the course of the ten-hour-plus mission the *Bears* were accompanied by two USAF/3rd Wing F-15C fighters from Alaska. En route the bombers topped up their tanks from IL-78 tankers.

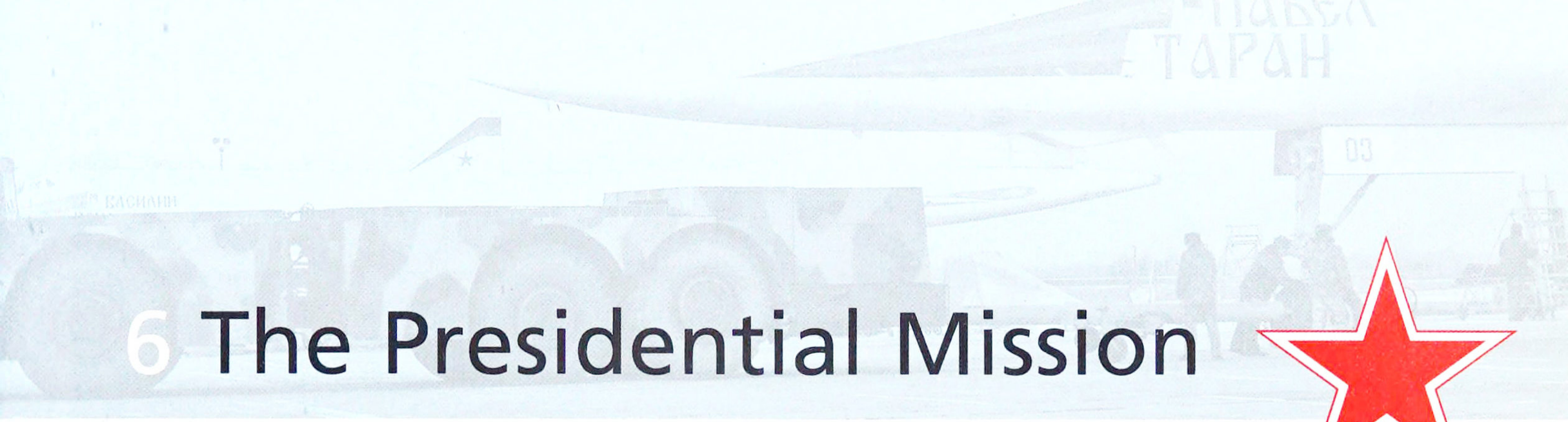
On 29th September two further *Bear-Hs* flew yet another mission from Ookraïnka AB over the Pacific towards the Aleutian Islands. This time a pair of F-22A Raptors put in an appearance to usher the visitors away.

In September, two Tu-95MSs from the same base flew over international waters of the Arctic Ocean to the Pacific and the Aleutian Islands. Again, two USAF fighters scrambled. The flight lasted nearly 15 hours and again involved in-flight refuelling.

Summing up the current condition of Russia's Long-Range Aviation as a measure of the events taking place in the last 18 years, we may say that, despite a considerable reduction in the aircraft fleet and personnel strength in comparison with Soviet times, the DA is still capable of fulfilling its objectives. The Russian MoD's practice of holding large-scale exercises and command/staff drills regularly in recent years testifies to this. The Russian strategic bomber crews have gained many new skills or regained old ones, such as maximum gross weight take-offs. There were cases when the 3,500-m (11,480-ft) runway was coming to an end and the heavy aircraft was still reluctant to leave the ground, becoming airborne literally from the last slab of concrete. The same goes for in-flight refuelling training. Thanks to long-range patrol flights and exercises the DA crews are now logging up to 80 flight hours per annum, which at least allows the pilots to feel more confident. From simulated missile launches the crews have progressed to actual ones. Elements of combat tactics were also perfected. Most importantly, however, the crews now have a better understanding of how to act on receiving orders for a combat sortie and when maintaining a combat patrol on an aircraft laden with nuclear weapons.

Upgraded Tu-160 '08 Red' *Vitaliy Kopylov* departs Engels. The type is set to stay in service beyond 2025.

Виталий Копылов
08



6 The Presidential Mission

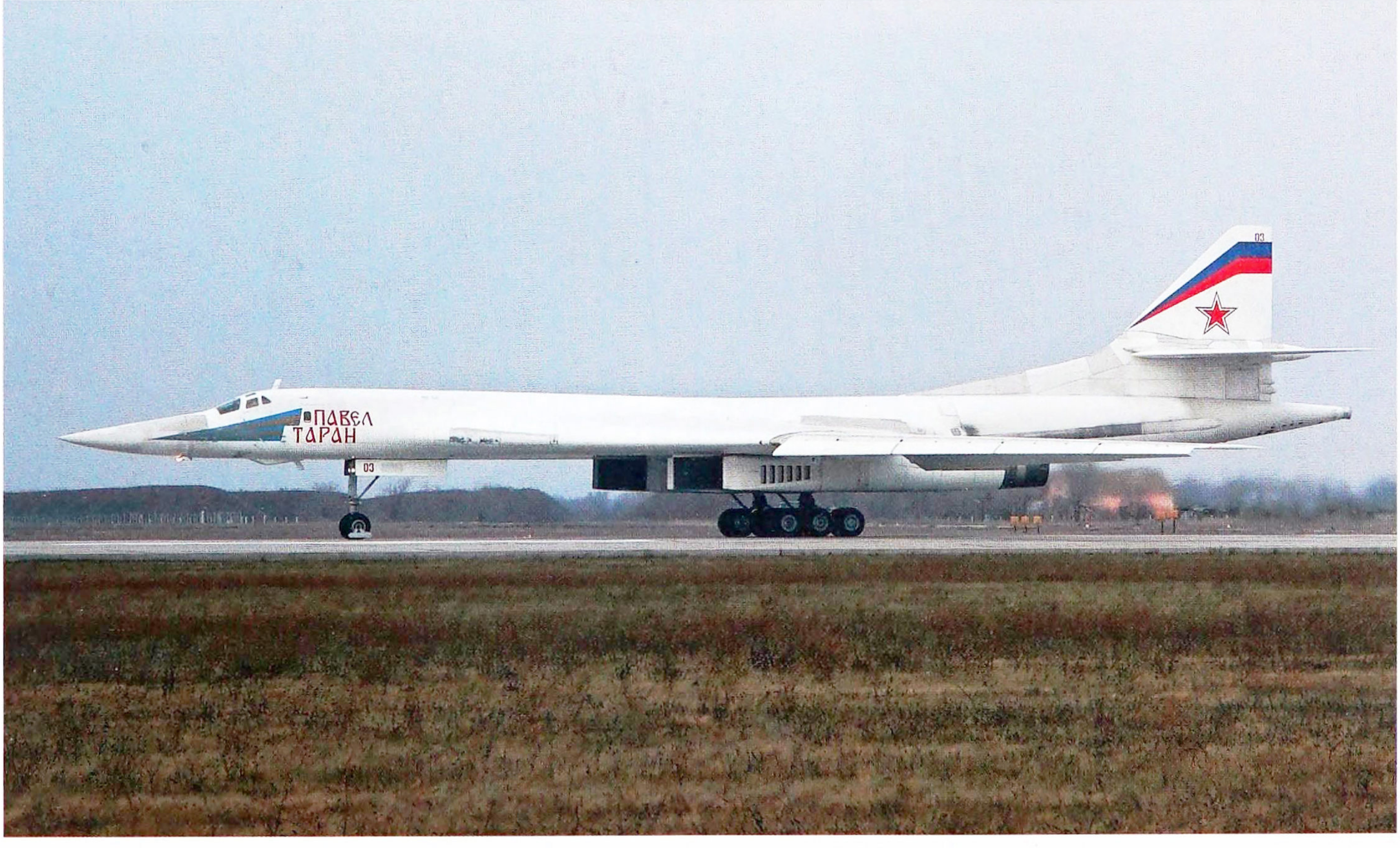
16th August 2005 left a lasting mark in the history of the Russian Air Force's Long-Range Aviation. That day, having paid a brief visit to Zhukovskiy to attend the opening ceremony of the MAKS-2005 airshow, the then President of the Russian Federation Vladimir V. Putin made a long flight in a Tu-160 strategic missile carrier. The aircraft, '03 Red' *Pavel Taran*, took off from Chkalovskaya AB a short distance west of Moscow, and the mission included a launch of the latest Kh-555 cruise missile.

Here is a detailed account of this extraordinary event.

Actually there was not one but *three* Tu-160s at Chkalovskaya AB that day, and the *Blackjack* crews awaited the President in a small briefing room. A map on the wall showed the area which the bombers were to fly over, with explanatory notes making it perfectly clear what the head of state would be doing in the sky over Russia that day. To give the reader some idea of what the President could see on the accompanying placards, here are a few excerpts from the instructions:

'...The Tu-160s' mission programme corresponds to mission profile 320 of the Combat Training Course [...] a training flight along a designated route with a variable profile including weapons application by a group of aircraft and in-flight refuelling. [...] At an altitude of 9,000 m [29,530 ft], on receiving the flight leader's command "Speed Mach 0.82", all crews shall increase wing sweep from 35° to 65° and set the CG position to 57% mean aerodynamic chord. As the wings go past 50° sweep, all crews shall engage the afterburners (85%) and accelerate to Mach 0.9. When the wings reach the 65° setting a climb to 11,100 m [36,420 ft] shall be initiated. On reaching this altitude the crews shall level off, engage maximum afterburner (115%) and accelerate to Mach 1.5...'

The instructions contained some rather unexpected phrases, too. *'Report immediately on the radio if you lose visual contact with the flight leader.'* Quite obviously the flight leader would be the Tu-160 in which the President would be flying.



The pre-flight briefing at Chkalovskaya AB. The front row comprises Air Force C-in-C Army Gen. Vladimir M. Mikhailov, President Vladimir V. Putin and Defence Minister Sergey B. Ivanov.

When Vladimir Putin entered the briefing room, the crews of the three aircraft were all there. Lt.-Gen. Igor' I. Khvorov, Commander of the 37th (Strategic) Air Army of the Supreme High Command, reported that the Air Force personnel participating in the flight were present, as was the management of the enterprises that created the Tu-160 weapons system. He also informed the President that, in addition to supersonic flight, the President would witness cruise missile launches, in-flight refuelling, maritime reconnaissance and low-

Previous page: '03 Red' *Pavel Taran*, the Tu-160 that carried President Putin on 16th August 2005.

Clad in flight suits, President Putin and his crew leave the HQ building at Chkalovskaya AB. The cloth bags contain the flying helmets.

altitude transonic flight that day. Khvorov told Putin that the planned flight was part of a tactical exercise whose aim was to build up a Long-Range Aviation task force covering the north-western strategic direction and accomplish the designated objective. Next, the Long-Range Aviation Commander informed the President of the Long-Range Aviation's order of battle and materiel strength and showed the planned flight route on the map.

'The point of origin is Chkalovskaya AB, the waypoint where we are to change course is Nizhniy Novgorod. After leaving the heavily populated areas we shall go supersonic, then decelerate and descend, after which the No. 3 aircraft in the group shall launch an ALCM near Vorkuta. Next, we shall rendezvous with the tanker and top up our tanks. After that, we shall descend to medium altitude and reconnoitre the locations of ships. After that, the task force shall perform ultra-low-level flight, doing 900 km/h [559 mph] at 200 m [660 ft].'

While giving the flight details, Lt.-Gen. Khvorov said that supersonic flight generally presented no difficulties. *'The airflow pattern around the wings changes as you go supersonic. There is a special moment – the moment when you slip through the sound barrier. Your pilot will keep you adequately informed about this phase of the flight.'*

The most optimistic part of the DA Commander's report concerned the landing. *'We will use the parachutes with 100% certainty on landing'*, he said.

Vladimir V. Putin in full flying attire. The breast patch with his name states his position as the Supreme C-in-C.

АЛЕКС МОЛОДЫЙ

DA Chief of Staff Maj.-Gen. Anatoliy D. Zhikharev gives the flight details to Vladimir Putin, who is holding a map case with the mission route map.

Long-Range Aviation Command and Air Force Main HQ representatives about to report to the President.

Vladimir Putin and Sergey Ivanov on the hardstand beside the 'Presidential' Tu-160.

'The **brake** *parachutes'*, came a comment from Russian Air Force Commander-in-Chief Army General Vladimir M. Mikhailov who was sitting next to the President. Putin gave a hint of a smile, appreciating the comment. *'Yeah,* – laughed Defence Minister Sergey B. Ivanov, – *surely not the crew members' parachutes!'*

Next, Vladimir Putin was given a brief medical check by Col. (Medical Service) Vyacheslav Lokshin, who was satisfied with his findings and told the President that his blood pressure was 120 over 80 – 'as befits a spaceman', as a Russian expression goes. *'Well, we will not be going into outer space today'*, Putin joked.

After the medical check Putin proceeded to the dressing room to don his flight suit. Next, he was given a briefing on flight safety procedures and how to use the ejection seat.

Meanwhile, the designers of the Tu-160 and the Kh-555 cruise missiles which the aircraft carried on that day were busy discussing the details of the forthcoming mission. One of the attending journalists accosted the *Blackjack*'s chief designer Valentin I. Bliznyuk. *'One of the Tu-160s crashed about a year ago. Has the cause of the accident been established?'* he asked.

'The case has been closed in absentia delicto', the designer said, frowning. (It is customary to instigate criminal proceedings after an air crash.)

'That means no one was held responsible?'

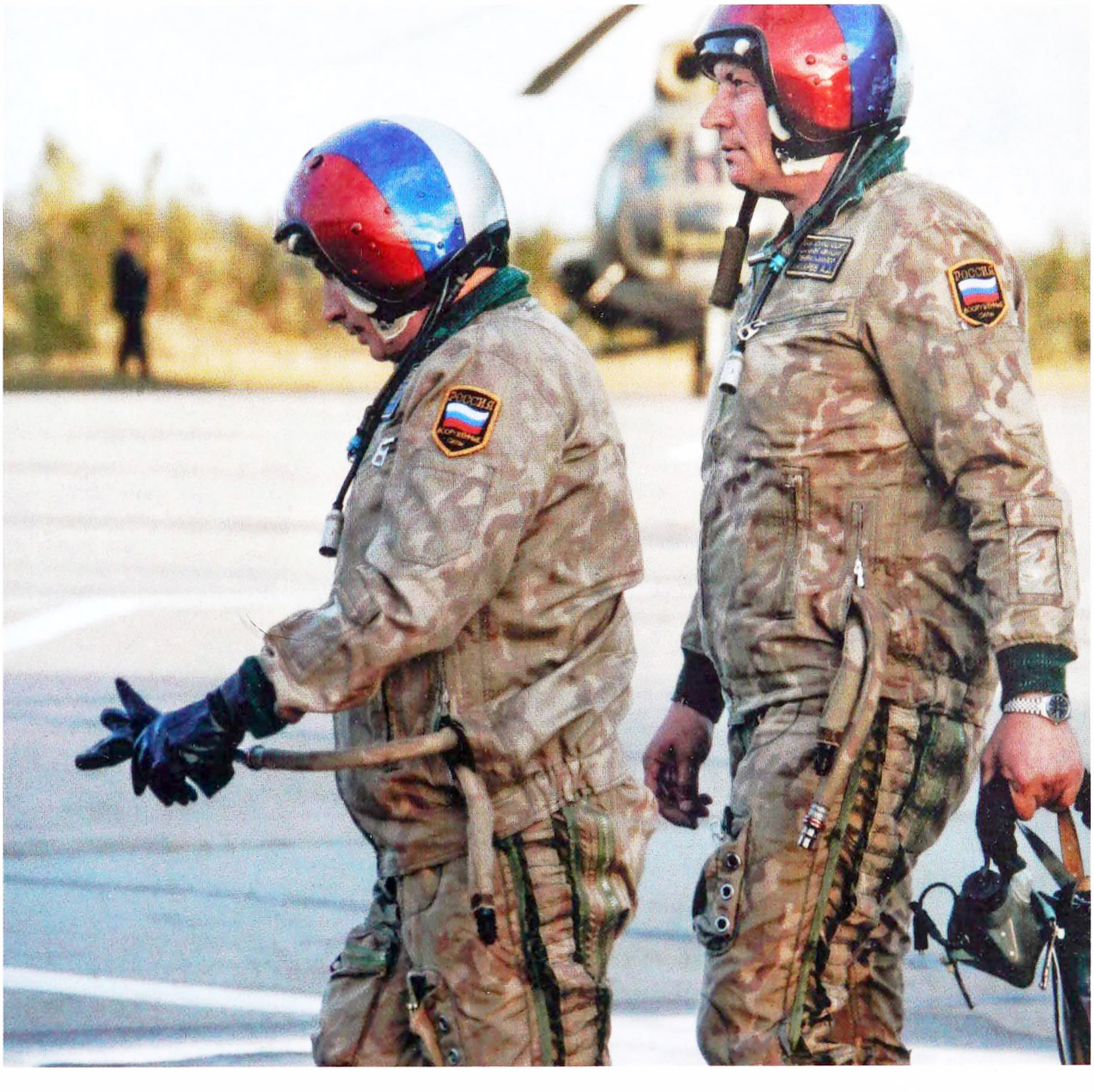
'The aircraft was not to blame', Bliznyuk replied reluctantly.

'In that case the blame rests with the crew?' the journalist pressed.

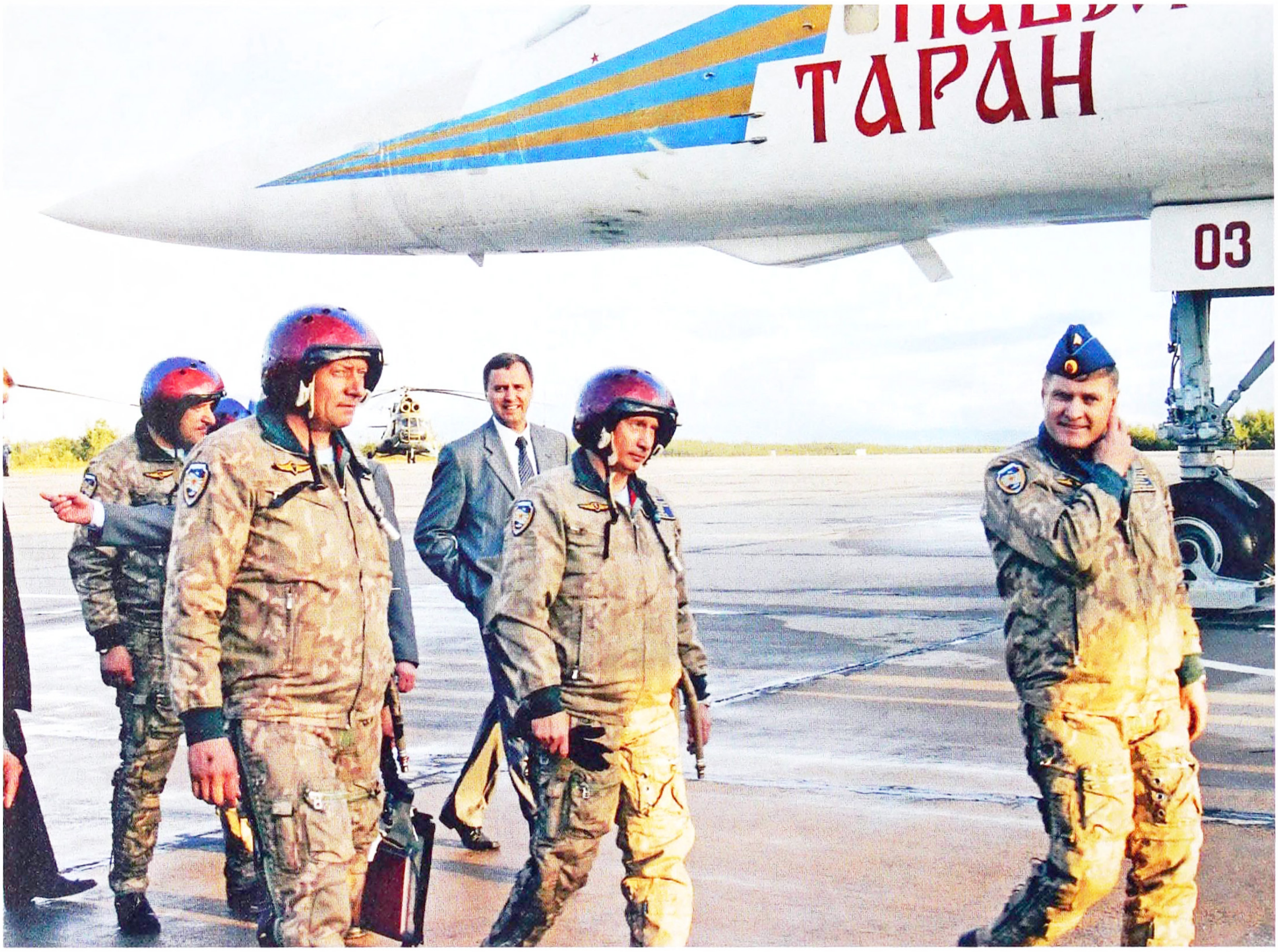
'No. I know what had happened. This will never happen again', said Bliznyuk and turned away, glancing through the window at the three Tu-160s ready to take off in a few minutes.

Mr. Putin came out into the open. He had already taken his seat in the staff car that was to take him to the aircraft hardstand when Prime Minister Mikhail Fradkov came running up to the car, out of breath. Meanwhile, officers were boarding a Russian Air Force Tu-154 airliner, one of them carrying the closely guarded briefcase with the missile launch codes for Russia's strategic nuclear forces (known universally as 'the nuclear briefcase'); the trijet was to take them to the airbase in Olenegorsk, Murmansk Region, where the 'Presidential' Tu-160 would land after the mission. Obviously the President was not about to delegate his powers to anyone for the duration of the flight.

The President has a discussion with the Minister of Defence shortly before boarding the bomber.

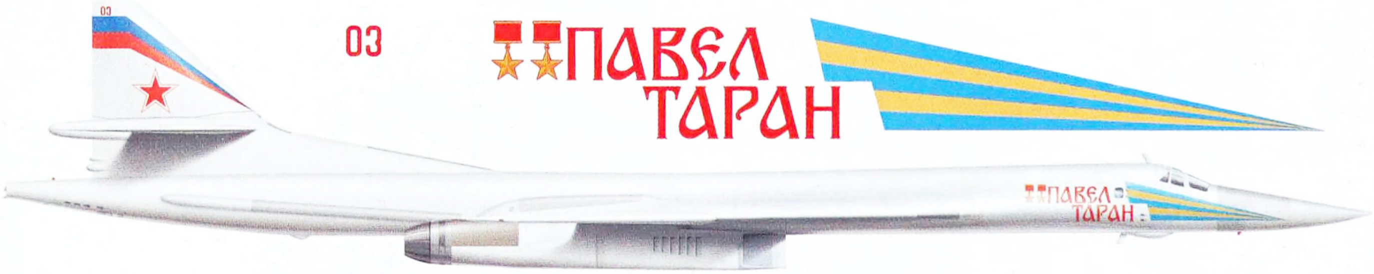


Now wearing ZSh-7 helmets (in Russian flag colours) instead of fore-and-aft caps, Putin and Maj.-Gen. Anatoliy Zhikharev are ready to fly. Putin is holding the air hose of his G suit.

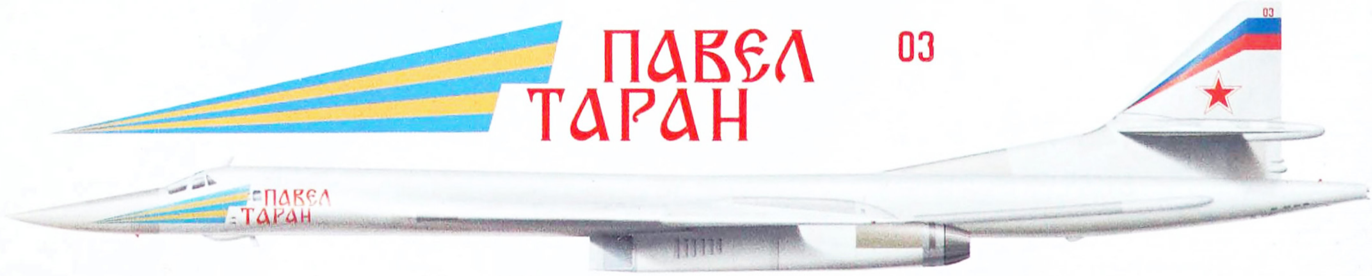


Vladimir Putin and the other crewmembers shortly before boarding the bomber.

Shortly afterwards Tu-160 '03 Red' *Pavel Taran* with the Supreme Commander-in-Chief of the Russian Armed Forces aboard took off and headed north to the area where the joint exercise of the Long-Range Aviation and the North Fleet was to take place. The crew, which was captained by the DA's Chief of Staff Maj.-Gen. Anatoliy D. Zhikharev, included navigator Col. Vladimir Adamov and WSO Lt.-Col. Oleg Baranov. It was closely followed by the other



121st GvTBAP Tu-160 '03 Red' *Pavel Taran* flown by President Vladimir Putin on 16th August 2005



two *Blackjacks*. '05 Red' *Aleksandr Golovanov* was flown by captain Col. Aleksey R. Serebryakov, co-pilot Lt.-Gen. Igor' I. Khvorov, navigator Lt.-Col. Igor' Sazonov and WSO Maj. Aleksandr Gannutin. The third aircraft ('07 Red' *Aleksandr Molodchiy*) was captained by Lt.-Col. Andrey Senchurov.

During the mission two of the Tu-160s launched four Kh-555 cruise missiles – the latest model on the inventory. All four missiles reportedly hit their designated targets at the Pemboy target range near Vorkuta in the Komi Republic. In the course of the mission the 'Presidential' Tu-160 was refuelled by an IL-78 tanker.

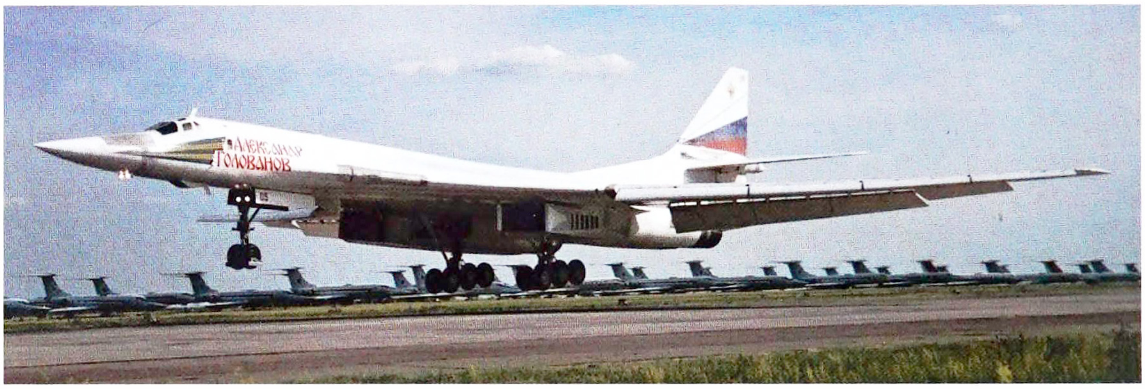
On the way back from the area of the exercise the missile carriers made a manoeuvre and headed for Olenegorsk. Before landing the *Blackjacks* were to descend to minimum altitude (200 m/660 ft) and make a high-speed dash over the Olenegorsk base at 900 km/h (559 mph). Actually the first Tu-160 that showed up was not the 'Presidential' one; it swept over the airfield at low altitude with approximately 30° bank. Immediately afterwards, '03 Red' passed over the base at somewhat higher altitude and with the wings level, then entered the airfield circuit and landed a few minutes later. Thus ended the experiment.

Five hours had elapsed from the take-off at Chkalovskaya to the landing at Olenegorsk. Putin had occupied the left-hand (captain's) seat during the flight, and Maj.-Gen. Zhikharev, who was the pilot in command, let the President try his hand at flying the aircraft during a non-critical phase of the mission. The President told this to the journalists at Olenegorsk while still wearing his flying outfit.

President Putin in the captain's seat of Tu-160 '03 Red'.

The final preparations before departure. Maj.-Gen. Anatoliy Zhikharev is in the co-pilot's seat.

'05 Red' *Aleksandr Golovanov*, one of the other two Tu-160s involved in the mission.



When asked if perhaps the flight was too dangerous, Putin said:

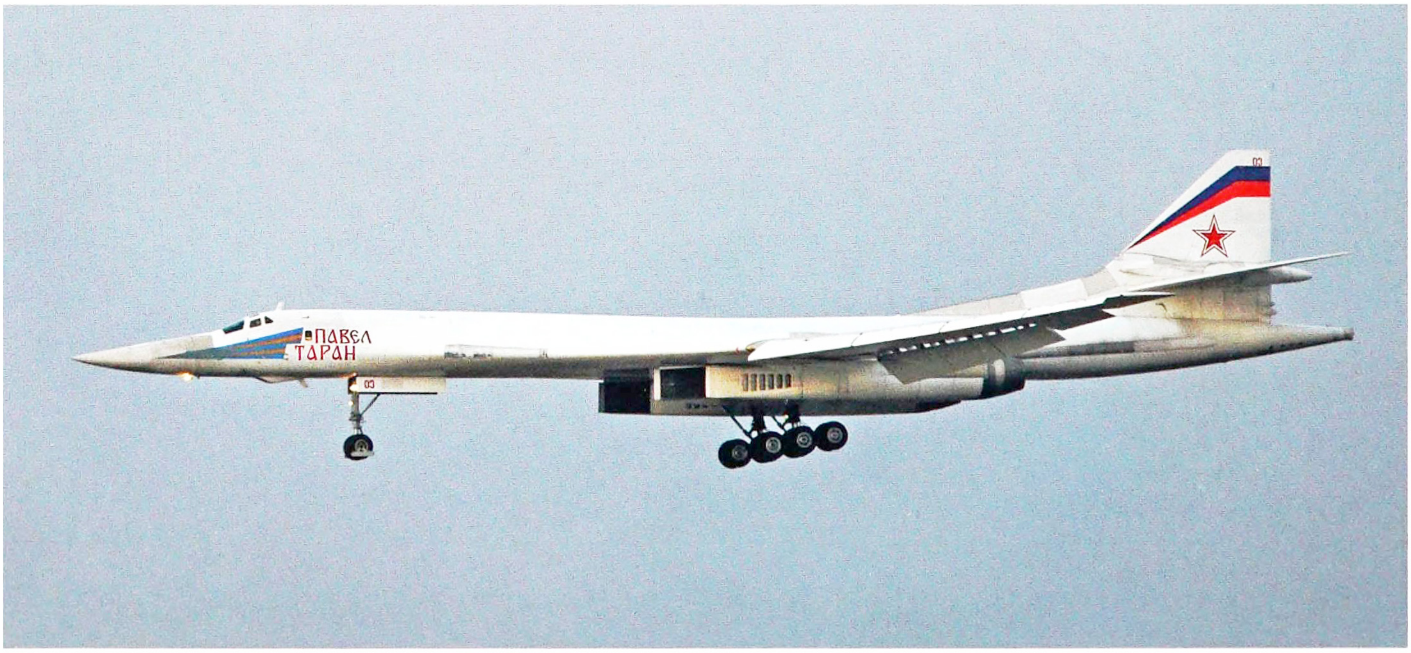
'I don't believe there was a lot of risk. Even though the aircraft is not formally on the inventory, it is operational and on combat duty. (Tu-160 operations in the Soviet Air Force had started back in 1987 but the type was not officially included into the Russian Air Force inventory until late December 2005 when President Putin signed an appropriate decree – *Auth.*) Also, in my position [as Supreme C-in-C] I need to know firsthand and feel how this [combat duty] process goes ahead.'

One of the correspondents asked whether the experience made Putin feel like Yuriy Gagarin (the first man in space – Auth.) *'No, not in any way* – the President replied – *This is in reality a routine flight, but it was the first of the kind for me. It was interesting and a useful experience. [...] I enjoyed seeing the air-*

A picture taken in the course of the flight; Putin and Zhikharev have oxygen masks hooked up.

Anatoliy D. Zhikharev was the pilot-in-command – for most of the mission.

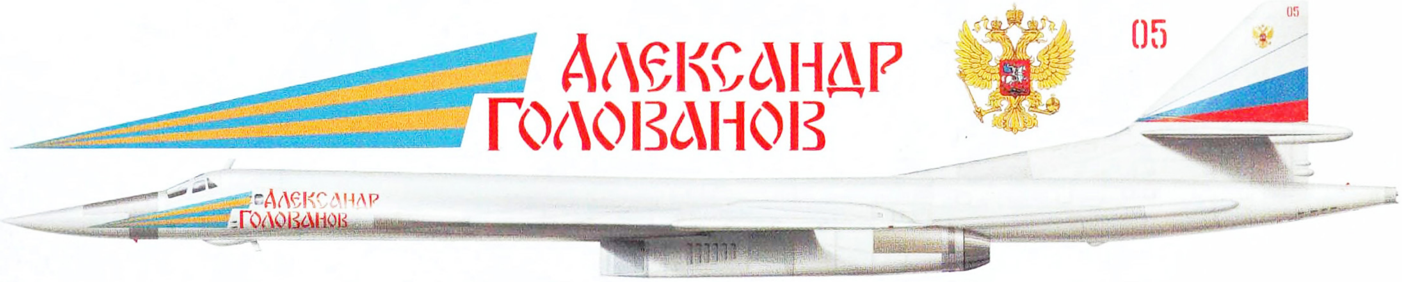
'03 Red' comes in to land at Olenegorsk.



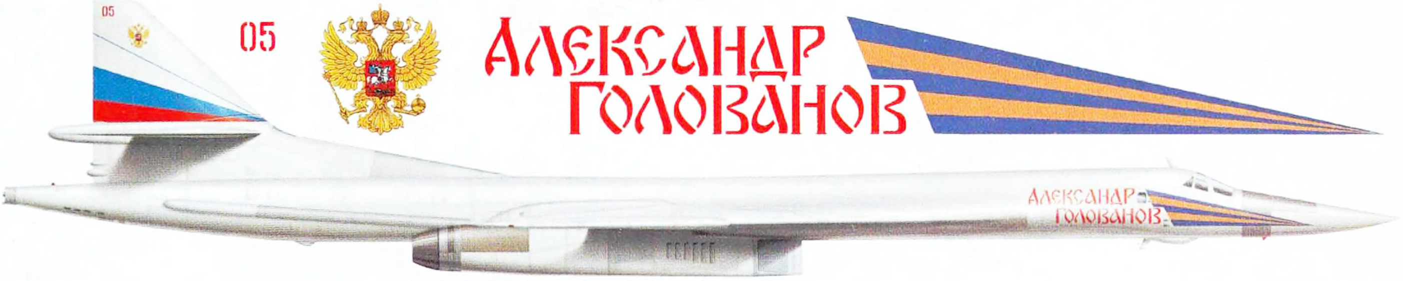
Putin casts an interested glance through the flight deck window during the flight.

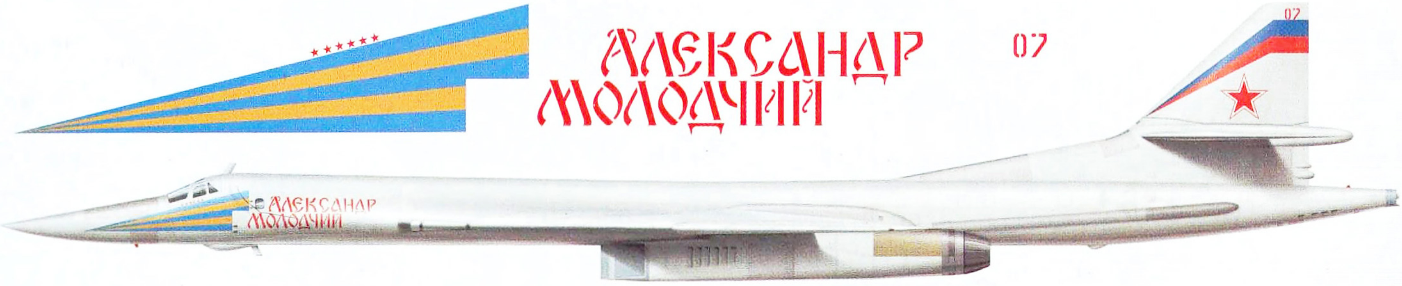
men at work. They acted unerringly, with good co-ordination and high professionalism – the way it should be in the Air Force. Besides, it was fascinating. The captain even let me control the aircraft for a while. I must admit this was a very gratifying feeling; I guess that's how it feels when you fly in your dreams. I'd like to say thanks for that.'

The President also expressed his satisfaction with the cruise missile launch results. *'Actually this was no run-of-the-mill flight. We were testing a new missile* – he said at the press conference in Olenegorsk – *18 months ago we were talking of the need to develop a*

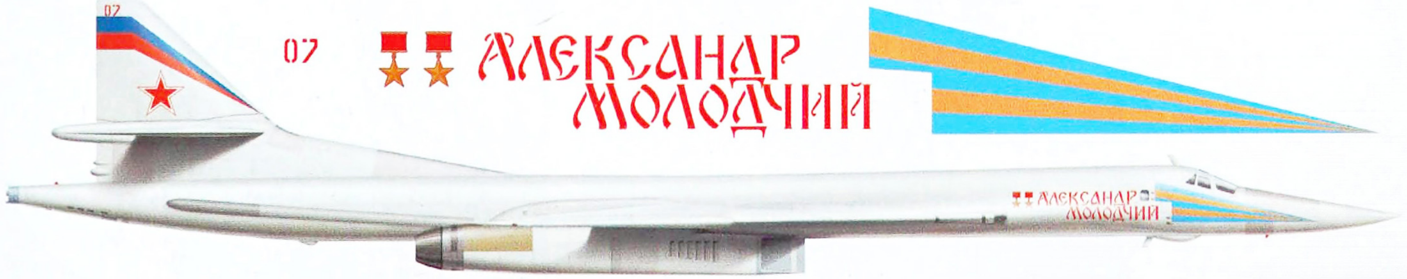


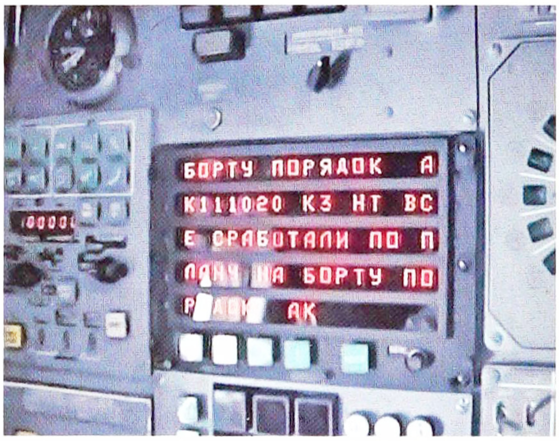
121st GvTBAP Tu-160 '05 Red' *Aleksandr Golovanov* (ex-*Il'ya Muromets*) which participated in the 16th August 2005 exercise, still in old colours



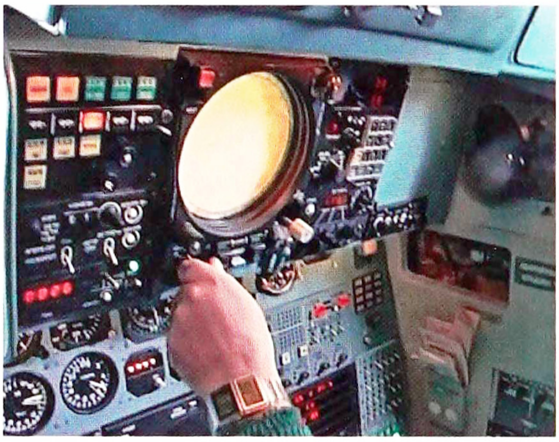


121st GvTBAP Tu-160 '07 Red' *Aleksandr Molodchiy* which participated in the 16th August 2005 exercise; note the non-standard nose flash

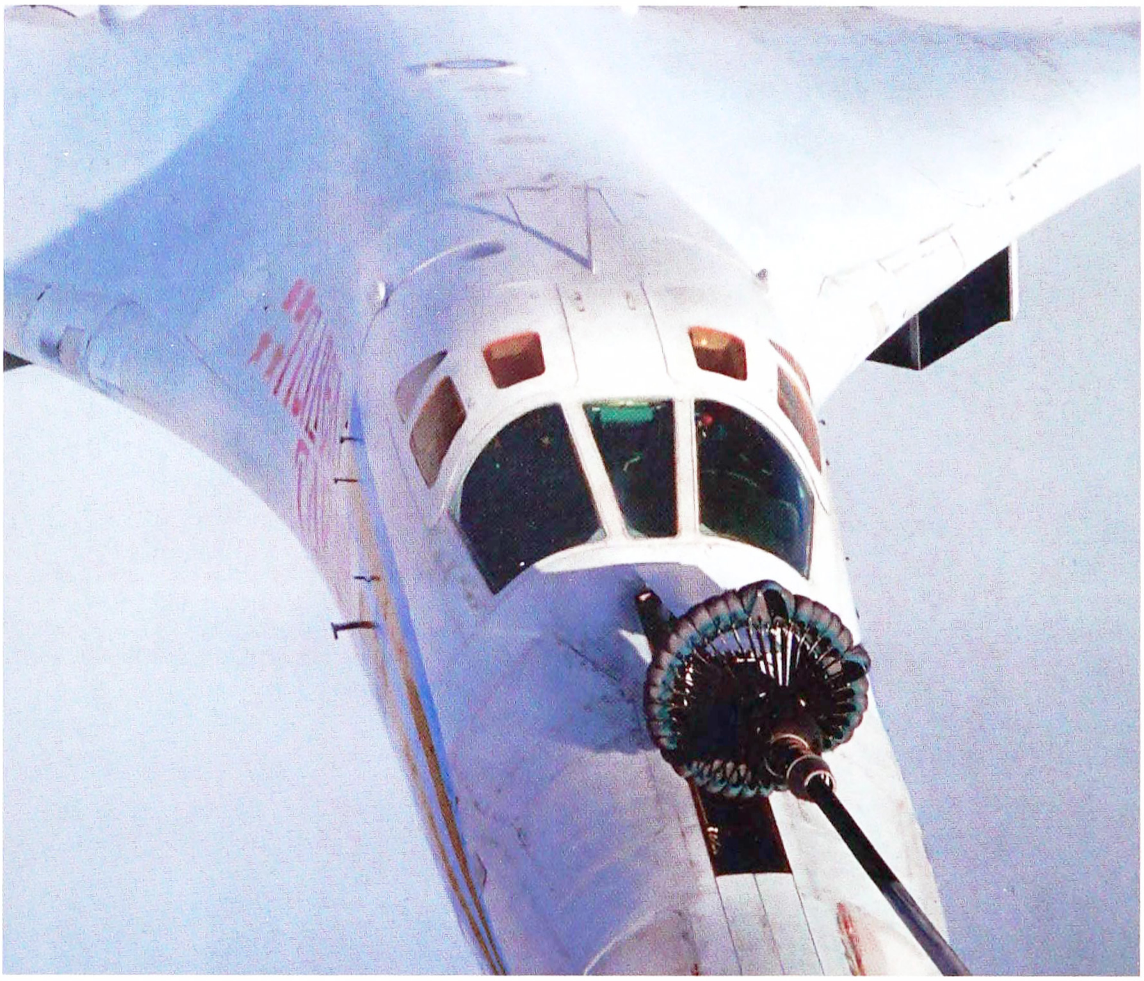



БОРТУ ПОРЯДОК А
К111020 КЗ НТ ВС
Е СРАБОТАЛИ ПО П
ЛАНУ НА БОРТУ ПО

A display on the Tu-160's communications control panel shows a running message: 'Everything OK on board, everyone acted as planned'.



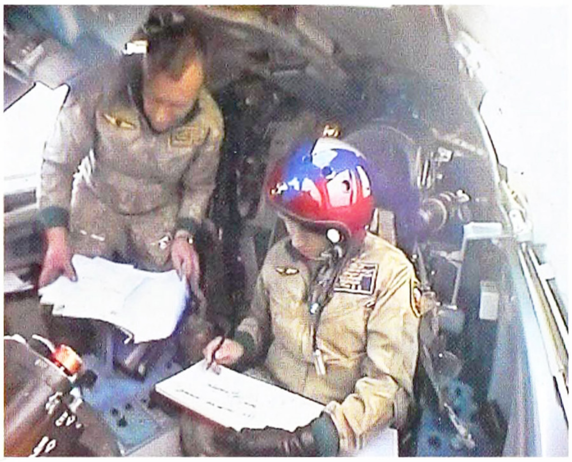
The radarscope of '03 Red' as the WSO prepares to launch a Kh-555 missile.



Here, Tu-160 '03 Red' is seen as it takes on fuel from an IL-78 during the 16th August exercise.

The tanker's captain seen at the same moment; no doubt he was aware whose aircraft he was refuelling.

The IL-78's refuelling systems operator at work during the 16th August mission.



The President opens the sliding direct vision window after the Tu-160 had landed at Olenegorsk.

Mission completed: Vladimir Putin makes an entry in the aircraft's log book.

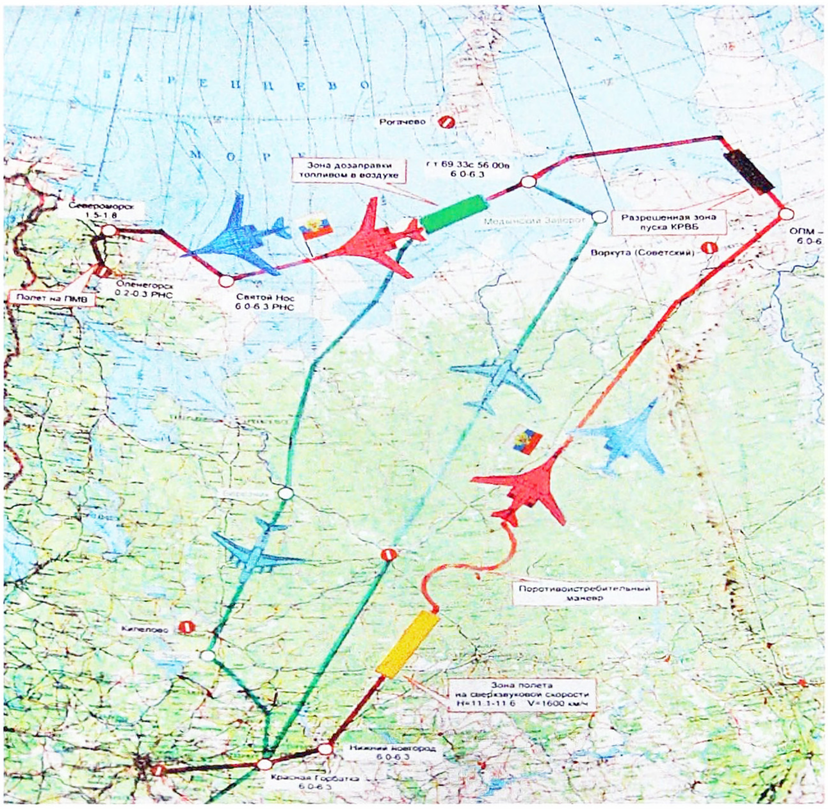
new system – a precision-guided long-range missile. The Minister of Defence has reported that the missile has destroyed the target successfully. This is a good result.'

The President thanked the crew that had taken him on his first flight in a strategic bomber. In turn, the crew presented Vladimir Putin with a model of the Tu-160 and a symbolic pilot's log made out in the name of the President and listing all the flights he had made in military aircraft, such as the Su-27UB, Su-25UB and Tu-160. He also received, as a gift, a map case with the map of the route he had flown in the Tu-160, a 'bone dome' flying helmet and associated oxygen mask, a flight suit (G suit), flying gloves, the safety pin from the Kh-555 missile 'his' aircraft had launched and a book on the history of the Long-Range Aviation. Before leaving, Putin shook hands with all the crew members, saying *'Many thanks for the enjoyment I had today'*.

The President was clearly impressed by his flight in a strategic bomber.

The crew (left to right: co-pilot Anatoliy Zhikharev, navigator Col. Vladimir Adamov, WSO Lt.-Col. Oleg Baranov and Vladimir Putin) discusses the flight with the Russian AF C-in-C.

Maj.-Gen. Anatoliy Zhikharev hands a gift to Vladimir Putin to commemorate the flight.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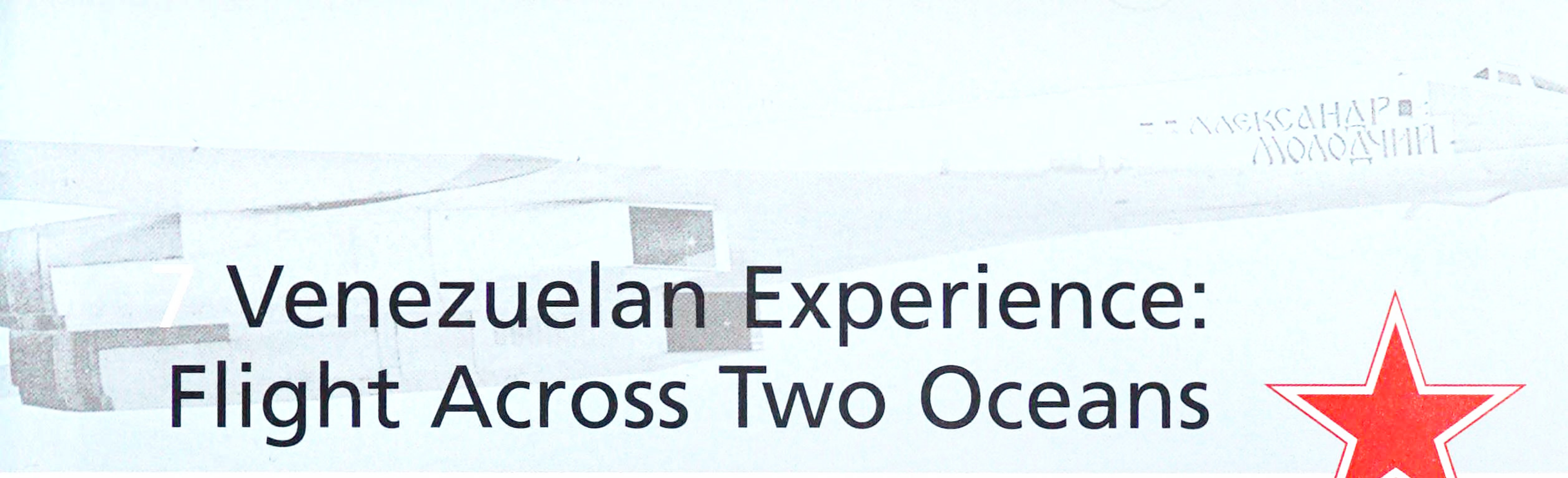
Красная Горбатка 6 0-6 3

A map showing the route of the 'Presidential' Tu-160 and the supporting IL-78. The coloured areas indicate the zones of supersonic flight (yellow), missile launch (black) and in-flight refuelling (green); note also the S-shaped fighter evasion manoeuvre.

Above right: The President was also presented with a model of the very aircraft he had flown.

Vladimir Putin shares his impressions of the flight with Russian Air Force C-in-C Army Gen. Vladimir M. Mikhailov.

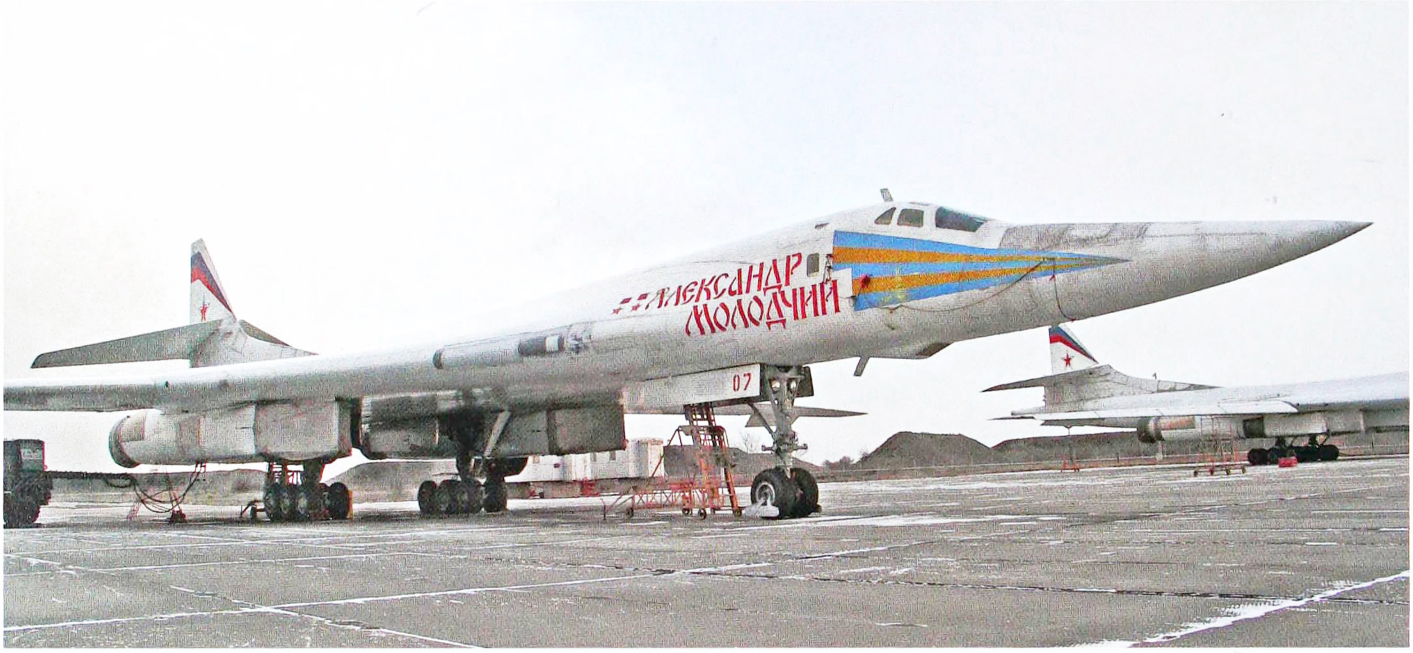


7 Venezuelan Experience: Flight Across Two Oceans

In September 2008 the Russian Tu-160 strategic missile carriers performed an unprecedented deployment abroad, and not just anywhere; the flight took them all the way across the Atlantic Ocean to Venezuela. On 9th September three *Blackjacks* with the tactical codes '07 Red' (named *Aleksandr Molodchiy*), '10 Red' (*Nikolay Kuznetsov*) and '11 Red' (*Vasiliy Sen'ko*) took off from Engels-2 AB. They headed north to pass around Europe and take their course towards the South American continent. The route was plotted over the international waters of the Arctic Ocean and the Atlantic Ocean. In the course of the flight the Tu-160 group was twice escorted by NATO fighters. In the region of Iceland a USAF F-16C scrambled from Keflavik, and in the Norwegian Sea area two Royal Norwegian Air Force F-16Cs from Bodø put in an appearance. The NATO fighters did not undertake any dangerous closing on the Russian aircraft. In accordance with the flight plan, only two *Blackjacks* were to land on the South American continent, the third one returning to its home base. This explains the confusion in some media reports which at first reported varying compositions of the 'pair' of Russian missile carriers ('07 Red', '08 Red' *Aleksandr Golovanov*, '10 Red' and '11 Red' were mentioned). The point is that the Russian media had not been informed of the fact that *three* aircraft were actually sent on that mission!

On 10th September Tu-160s '07 Red' and '11 Red' arrived at El Libertador airbase near Caracas, Venezuela, after a 13-hour non-stop flight. '07 Red' was captained by 121st GvTBAP Deputy CO, Pilot 1st Class Lt.-Col. Andrey Senchurov, while the other aircraft was captained by deputy Commander of the Long-Range Aviation Maj.-Gen. Aleksandr Afinogentov. Tu-160 '10 Red' returned to Engels. There were no nuclear warheads on board either aircraft.

A Russian Air Force official, Lt.-Col. Vladimir Drik, pointed out that never before had Russian strategic aircraft come so close to the equator (within 400 km/250 miles).



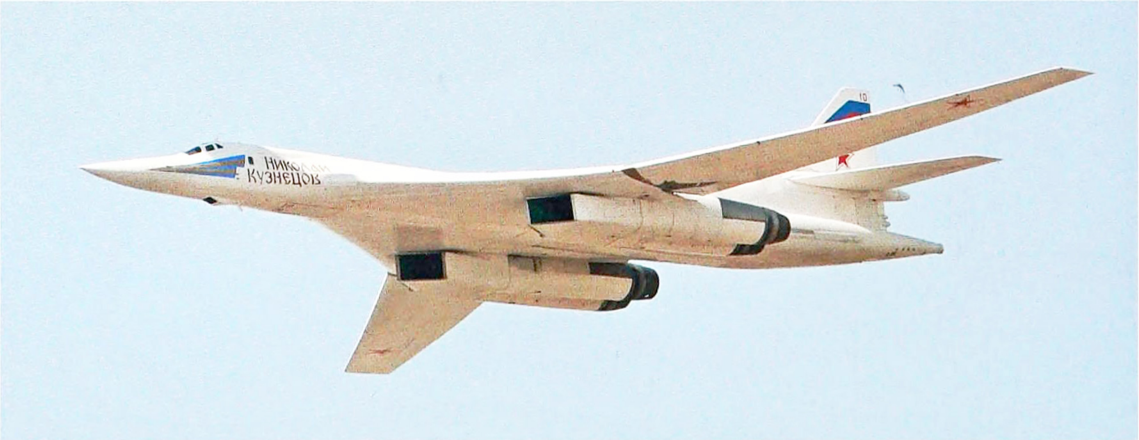
'07 Red' *Aleksandr Molodchiy*, one of the Tu-160s that visited Venezuela.

Here it should be mentioned that in July 2008 Venezuelan President Hugo Chávez, a fierce critic of the USA, had visited Russia. He had talks with President Dmitriy A. Medvedev and Prime Minister Vladimir V. Putin on various issues, including cooperation in defence matters. Venezuela is an established partner of Russia in this area, having signed 12 contracts for Russian weapons (Sukhoi Su-30MKV fighters, Mil' Mi-17 transport helicopters and 100,000 Kalashnikov AK-103 assault rifles) worth more than $4.4 billion in total between 2005 and 2007. On 1st September President Chávez said that Venezuela welcomed the Russian Navy and Air Force on its territory. *'If the Russian Navy arrives in the Caribbean or the Atlantic it may certainly visit Venezuela, we have no problems with that and would warmly welcome it* – he said – *And if Russian long-range bombers should need to land in Venezuela we would not object to that either. We will also welcome them.'* Well, no sooner said than done.

In accordance with the pre-arranged plan and an understanding reached with Venezuela, within the following several days the *Blackjacks* made two training flights over international waters. Each of the flights lasted about six hours. The first flight took place over the Caribbean Sea area in the direction of Panama, the second one was performed in the direction of Brazil at some distance from the coast line.

President Hugo Chávez was enthusiastic about the visit of the Russian strategic aircraft. *'You have come to a brother nation, to a people which appreciates Russia and her bravery'*, said Chávez, addressing the Russian crews, as he spoke at the launch ceremony of a new Venezuelan Navy frigate. He went on to say, *'Thanks to the strategic cooperation with Russia and the arrival of the [Russian] aircraft on Venezuelan soil and will be flying sorties over the Caribbean today and in the next few days, we will be informed of even the minutest movements of the [US Navy's] 4th Fleet.*

Previous page: The other Tu-160 involved, '11 Red' *Vasiliy Sen'ko*.



The third Tu-160 that departed from Engels on 9th September but came back – '10 Red' *Nikolay Kuznetsov*.

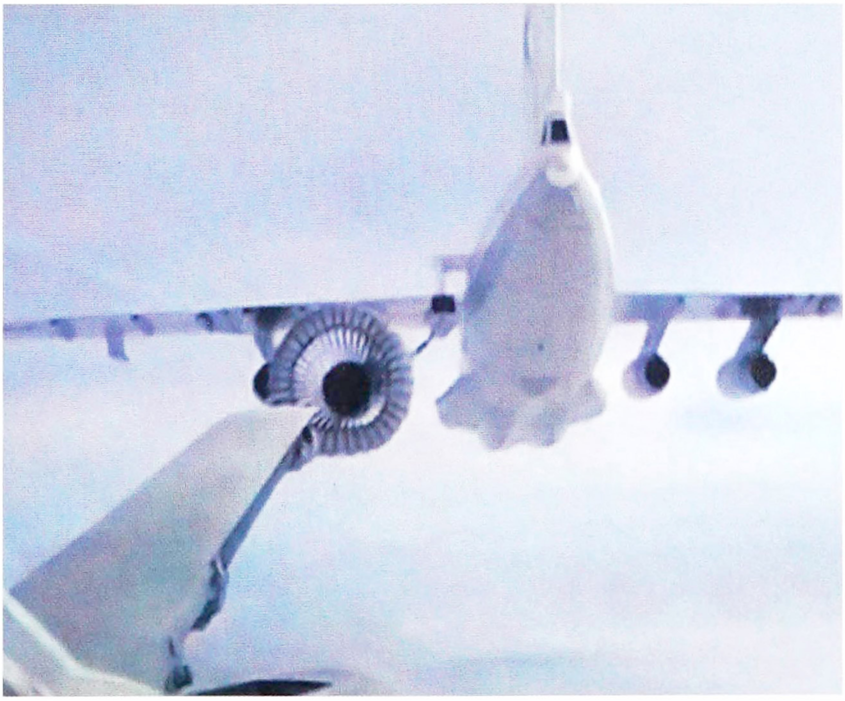
[...] Our strategic ties with Russia will grow stronger by the day because we are living in a world of free nations', said Chávez.

The *Blackjack* produced an indelible impression on the Venezuelan leader. To mark his solidarity with Bolivia's President Evo Moralez, who indeed had reasons to suspect the USA of fanning political tension in the country, on the day of the Russian bombers' arrival Chavez expelled from Caracas the US ambassador, who was blameless, and threatened to stop oil deliveries to the USA if the pilots observe from the air that the US Navy's 4th Fleet had stepped up its activity. (The 4th Fleet had indeed become active in Latin American waters in July 2008 after a five-decade lull.) He described the presence of the two Russian missile carriers in the country as 'a warning to the American empire' that Russia supported Venezuela, and that Venezuela was 'no longer poor and lonely'. Speaking at a press conference shortly after the arrival of the bombers, he said, in Spanish, *'...los bombarderos stratégicos rusos Tupolev-cien-sesento han atterrizado en Venezuela'* ('...the Russian Tu-160 strategic bombers have landed in Venezuela') and then, after a pause, could not resist the urge to add triumphantly: *'Yessss'*. He emphasised: *'The landing of the strategic bombers is an evidence of transition to multi-polarity in world politics. Venezuela is free to develop political, economic, scientific and military-technical relations with those countries, with which she deems it necessary'.* Western correspondents accredited at Caracas noted that it was long since they had seen Hugo Chávez so happy and satisfied.

'I am going to fly one of these birds, – Chávez said. – *Yesterday I did not appear in public because I was having a training session in a flight simulator. So, may it be known to you that I will be at the controls! Fidel, I am going to whizz over your island at treetop level!'*

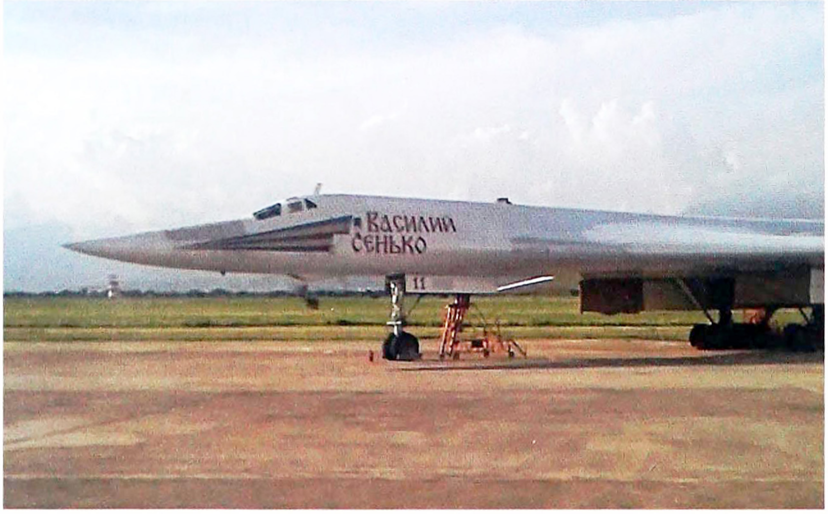
Alseksandr Molodchiy about to be refuelled by an IL-78 en route to Venezuela.

A view from the co-pilot's seat of one of the Tu-160s about to 'hit the tanker'.



Two views of the Tu-160s and the supporting An-124-100 of the 224th Flight Unit at El Libertador AB.

Below and opposite: Tu-160 '11 Red' *Vasiliy Sen'ko* parked at El Libertador.



However, somewhat later information leaked into the press that no Tu-160 flight simulator was, in fact, available in Venezuela, and the skills that Chávez had were not sufficient for him to participate in a flight even as a passenger. Besides, he did not speak Russian, and the Russian pilots did not speak Spanish.

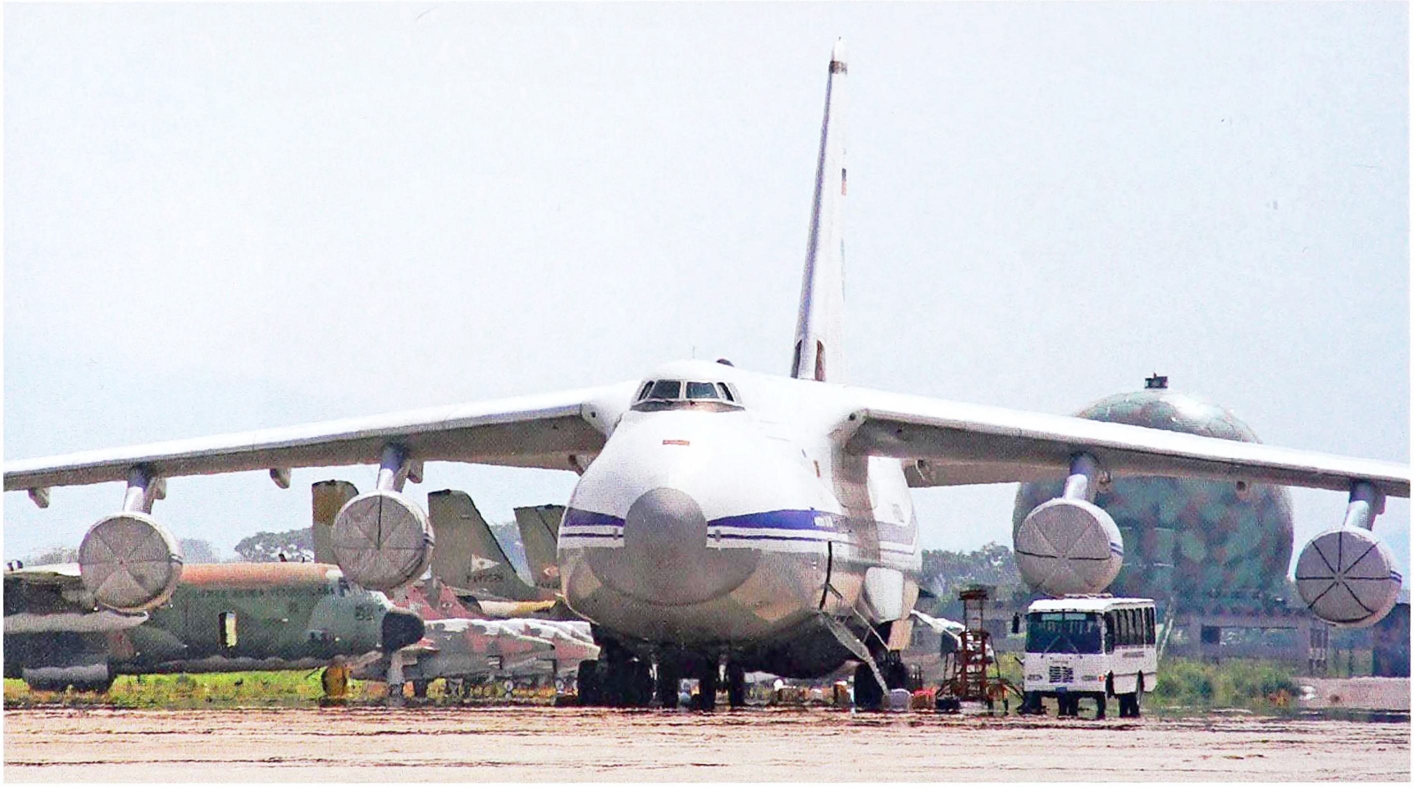
Predictably, the Russian bombers' visit caused acute displeasure in the West. Russia was then receiving more than enough bad publicity as it was, its relations with the West having been severely strained by the five-day conflict with US-backed Georgia in early August 2008. That was not the only sore point; Moscow was also frustrated with

Two views of Tu-160 '07 Red' *Aleksandr Molodchiy* in front of the hangar at El Libertador.

Washington's plans to deploy elements of a missile defence system in Poland and the Czech Republic (recently put on hold), as well as by NATO inching closer and closer to Russian borders, particularly Washington's support of NATO membership for Georgia and Ukraine. In turn, Russia sought to expand its military presence in recent years, up to the point of *'flexing some muscle in America's backyard'* and *'demonstrating [...] that it has a foothold in a region traditionally dominated by the US'*, as some defence analysts put it.

The authoritative daily *The Washington Post* wrote that the presence of such dangerous Russian aircraft in the western hemisphere –

One of the Tu-160s takes off from El Libertador on a training mission over the Caribbean.

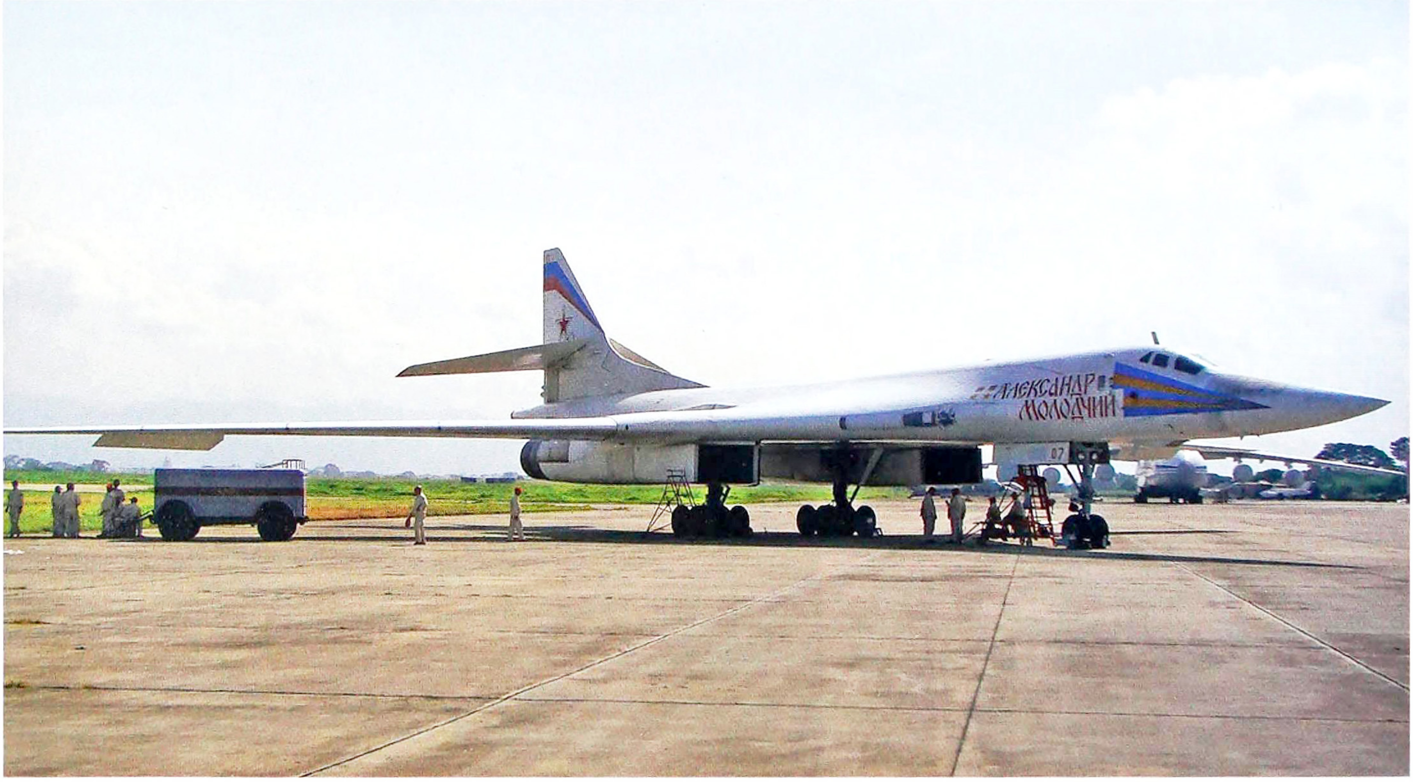


The An-124 shares the apron with Venezuelan Air Force T-2D trainers, C-123B and C-130H transports.

Another view of '07 Red' at the Venezuelan base.

the first such case since the end of the Cold War – was a gesture aimed at angering the US. Even before that, the then Secretary of State Condoleezza Rice had voiced her displeasure at the Russian strategic aviation 'getting cheeky' close to the US borders; this came at a time when the US administration was on the point of calling Russia the 'Evil Empire' for a second time due to the war between Russia and Georgia. (Earlier, President Ronald Reagan had applied this term to the Soviet Union back in 1981.) The Russian Foreign Ministry had countered by saying that US aircraft were poking around Russia's borders just as much.

The Russian deployment to Venezuela (the *Blackjacks'* visit and the joint naval exercise in the Caribbean that followed shortly afterwards) was indeed perceived by some in the

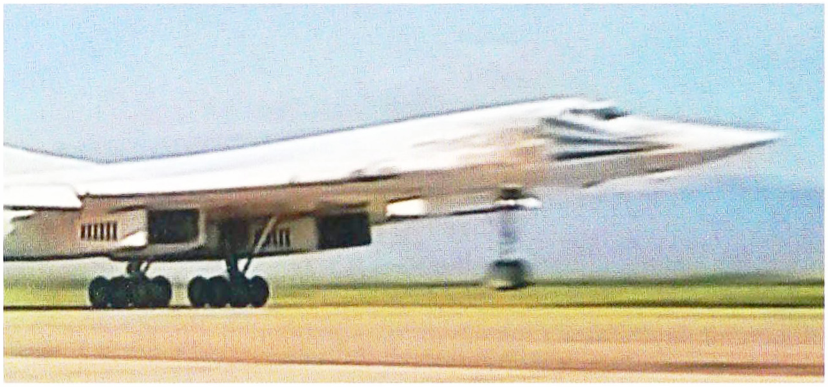


Tu-160 '11 Red' basks in the Venezuelan sun.

West as a retaliatory move following the NATO deployment of four warships (the frigate USS *Taylor* and three similar vessels from Spain, Germany and Poland) to the Black Sea – allegedly to deliver humanitarian aid to Georgia. Russia had denounced the exercise as part of a Western military build-up sparked by the conflict and an encroachment on Russia's sphere of influence. Suspicion arose that the 'humanitarian aid' was in fact weapons intended for the battered Georgian Army.

Russia denied that the Russian exercises with Venezuela had any connection to the war in Georgia. *'These exercises were planned long before the Georgian-Ossetian conflict. They are not linked to the conflict'*, said

The Russian crews take cover from the sun in the shadow of Tu-160 '07 Red'.



Tu-160s '11 Red' (top) and '07 Red' touch down on Venezuelan soil on 10th September 2008.

Assistant Commander Capt. Igor' I. Dygalo. He was echoed by Russian Foreign Ministry spokesman Anatoliy Nesterenko, who said, *'This is a planned operation, and is not in any way connected to current political events, nor to the situation in the Caucasus. These exercises will in no way be directed against the interests of a third country.'* Surely no one wanted a new Caribbean Crisis.

One of the Tu-160s streams its triple brake parachutes at El Libertador.

Maj.-Gen. Pavel V. Androsov, the then Commander of Russia's Long-Range Aviation, stated the main purpose of the unprecedented overseas deployment as follows. *'We would like to proceed from Venezuelan territory and have a look at the Caribbean Basin, flying over international waters where we're allowed to. […] We had properly filed all requests for the trans-Atlantic flight of our aircraft well in advance. The USA, too, was aware that we were going to fly to Latin America'*, he said.

Venezuelan President Hugo Chávez gave a reception in honour of the Russian strategic bomber crews who had been operating over the Caribbean for a week. The trip across two oceans not only gave the airmen new impressions (the Tu-160 crews had not previously ventured that far from home) but also provided valuable experience of operations in tropical latitudes. The multi-hour flights over Venezuela and the international waters of the Atlantic Ocean, as well as operations from the Venezuelan base, were a new experience even for the seasoned Russian Air Force generals.

After a week's stay in Venezuela the Russian jets departed from El Libertador AB at 1000 hours Moscow time on Thursday, 18th September. After following the designated flight route above international waters of the Atlantic and the Arctic oceans the *Blackjacks* landed at their home base at 0116 hours Moscow time on 19th September, touching down just two minutes apart. The crews climbed out into the chilly September night still wearing the light tropical uniforms, which had to be augmented immediately by warm jackets.

Actually the bombers were due to return home on Monday (15th September) but the Venezuelans would not let the crews go so easily – the Russian airmen were treated like national heroes. *'The itinerary included several cultural and educational items – sightseeing trips and visits to cultural institutions, which of course resulted in a certain delay. We gladly accepted the offer to stay in this welcoming country for a while longer'*, said Aleksandr Blazhenko, Commander of the Russian Air Force's 22nd GvTBAD.

On the night of their return the airmen received a warm welcome twice. The first was the official welcoming ceremony for everyone; the second was the actual 'home, sweet home' and family reunion. When navigator Vladimir Sukhodol'skiy returned home, his wife and kids laid the table for a festive dinner. Actually his wife had been 'the last to know', learning of his South American deployment only when she saw the news on TV. *'We had no idea where they would be going* – she says –

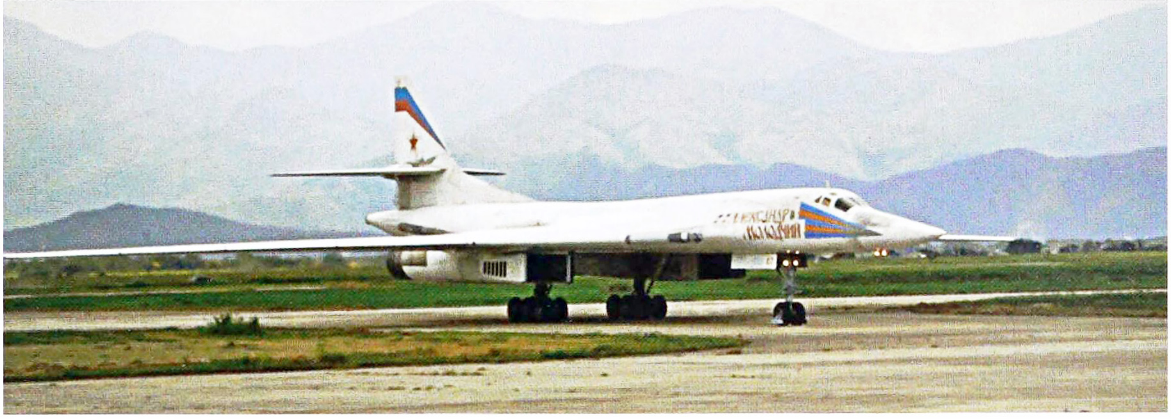
This is how El Libertador AB looked from the flight deck of the Tu-160.

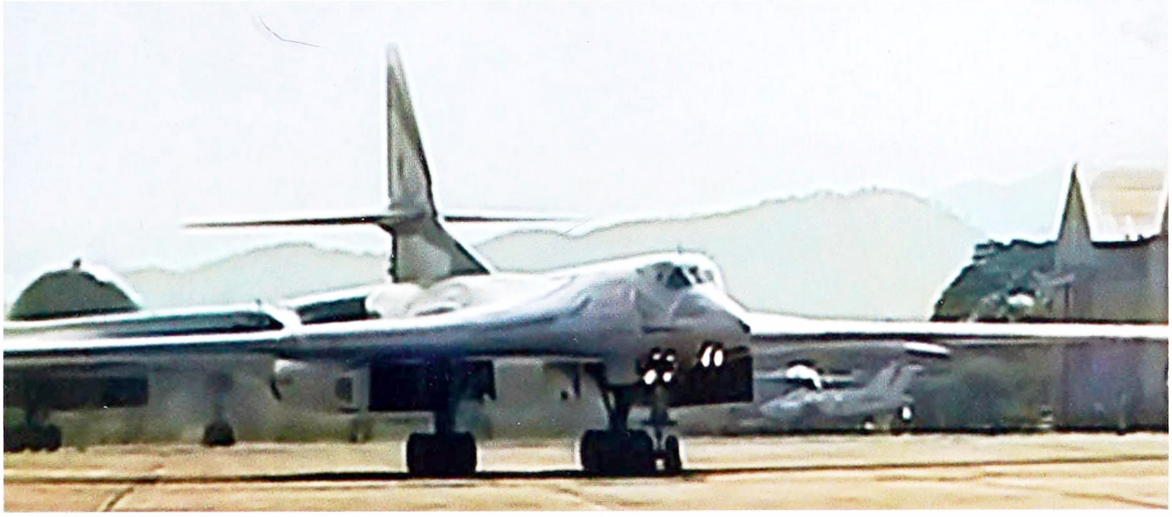
One of the *Blackjack* captains during the trans-Atlantic flight.

He told us it would be a lengthy secondment up north. Well, so be it. We had sort of got used to it – such trips were fairly frequent. We did not go into details.'

Deputy Commander-in-Chief of the Russian Air Force Aleksandr Afinogentov told the RIA Novosti news agency that the Tu-160 strategic missile carriers of the Russian Long-Range Aviation had established two world records during their flight from Engels AB to Venezuela and back. *'For the first time the duration of flight of a Tu-160 exceeded 15 hours, for the first time the aircraft received 25 tonnes [55,115 lb] of fuel during an air-to-air*

A Tu-160 WSO during the trans-Atlantic flight.

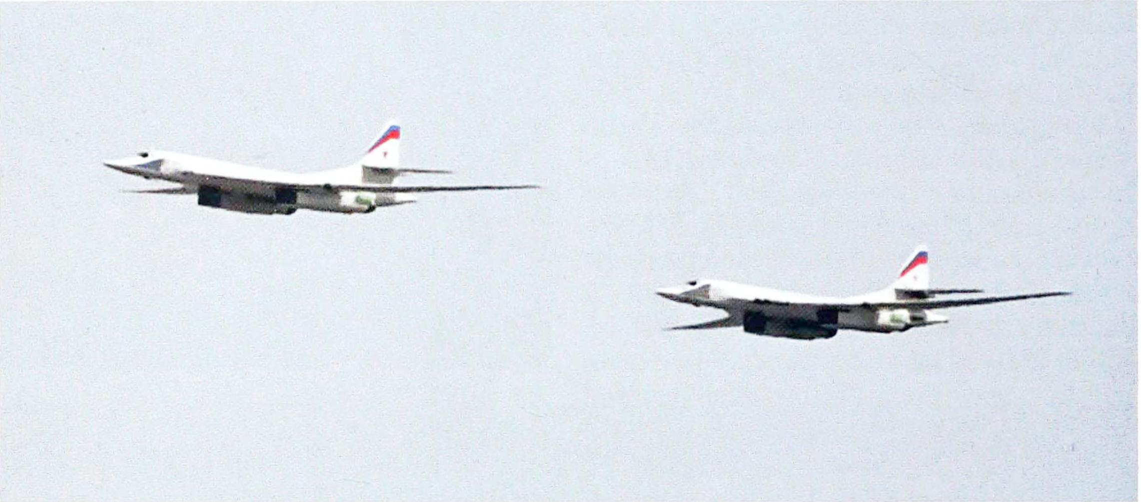




Tu-160 '07 Red' taxies in with the mountains of Venezuela as a backdrop.

refuelling performed in the vicinity of Great Britain – said he – *The crews of the two bombers spent over ten hours in the textureless area above the ocean with no radio aids whatsoever, so we placed our hopes on the professionalism of the crews and the reliability of the hardware. Building on this experience, we will probably make suggestions as to the improvement of the aircraft.'* According to Afinogentov, in other respects the flights did not differ appreciably from the usual ones, albeit some complications were caused by the weather (when the aircraft were departing from Venezuela, there were powerful thunderstorms in the area, which necessitated a roundabout route). *'Flights in those latitudes*

DA Chief of Staff Maj.-Gen. Anatoliy Zhikharev in Venezuela in tropical uniform.



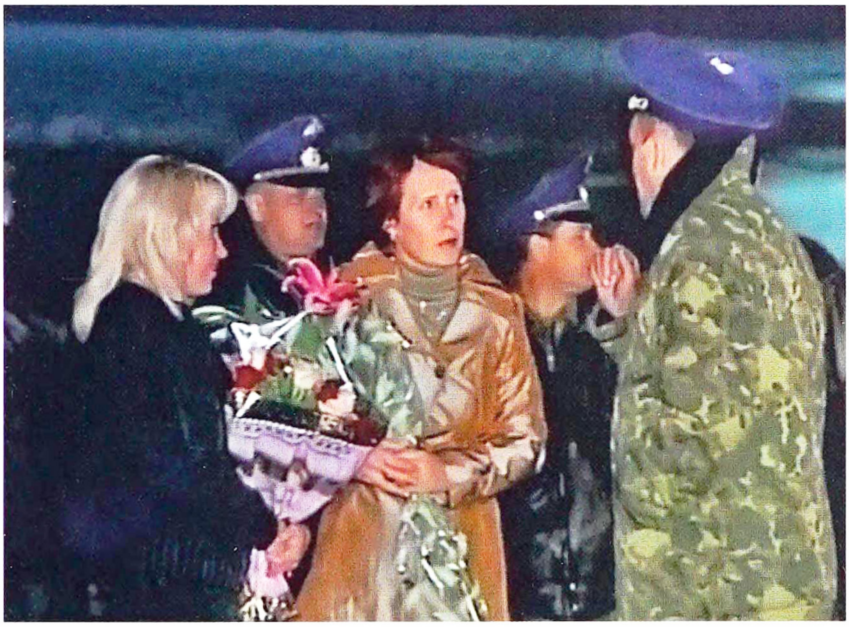
The two *Blackjacks* in formation flight over the Caribbean.

The Tu-160s are 'tucked in for the night' at El Libertador AB.

Opposite page, top row: Long-Range Aviation Deputy CO Aleksandr Afinogentov after the bombers' return to Engels after midnight on 19th September.

Centre row: The airmen's reunion with their wives at Engels.

The late-night welcoming ceremony complete with guard detail and the 121st GvTBAP banner.



Вас
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Tu-160s *Vasiliy Sen'ko* and *Aleksandr Molodchiy* parked after coming home.

Another view of Tu-160 '11 Red' at Engels on 19th September.

have a few peculiarities. This experience will be summed up and used to train young pilots in the future', Afinogentov said.

It should be noted that the strategic missile carriers of Long-Range Aviation were not alone to take part in this action; they were supported by IL-78 tankers and by an An-124-100 Ruslan (*Condor*) transport from the Russian Air Force's 224th Flight Detachment. It was the An-124 that transported to Venezuela the servicing personnel and ground support equipment for the Tu-160s, as well as a small delegation from the Long-Range Aviation, interpreters and so on.

The 26-hour flights of the two *Blackjacks* 'there and back again' had cost the Russian budget a pretty penny. Russia's Deputy Chief of General Staff Col.-Gen. Anatoliy Nogovitsyn mentioned once that *'the cost of a flight hour on the Tu-160 without weapons application is 580,000 roubles'* and that the type was *'the most costly to operate in the Russian Air*

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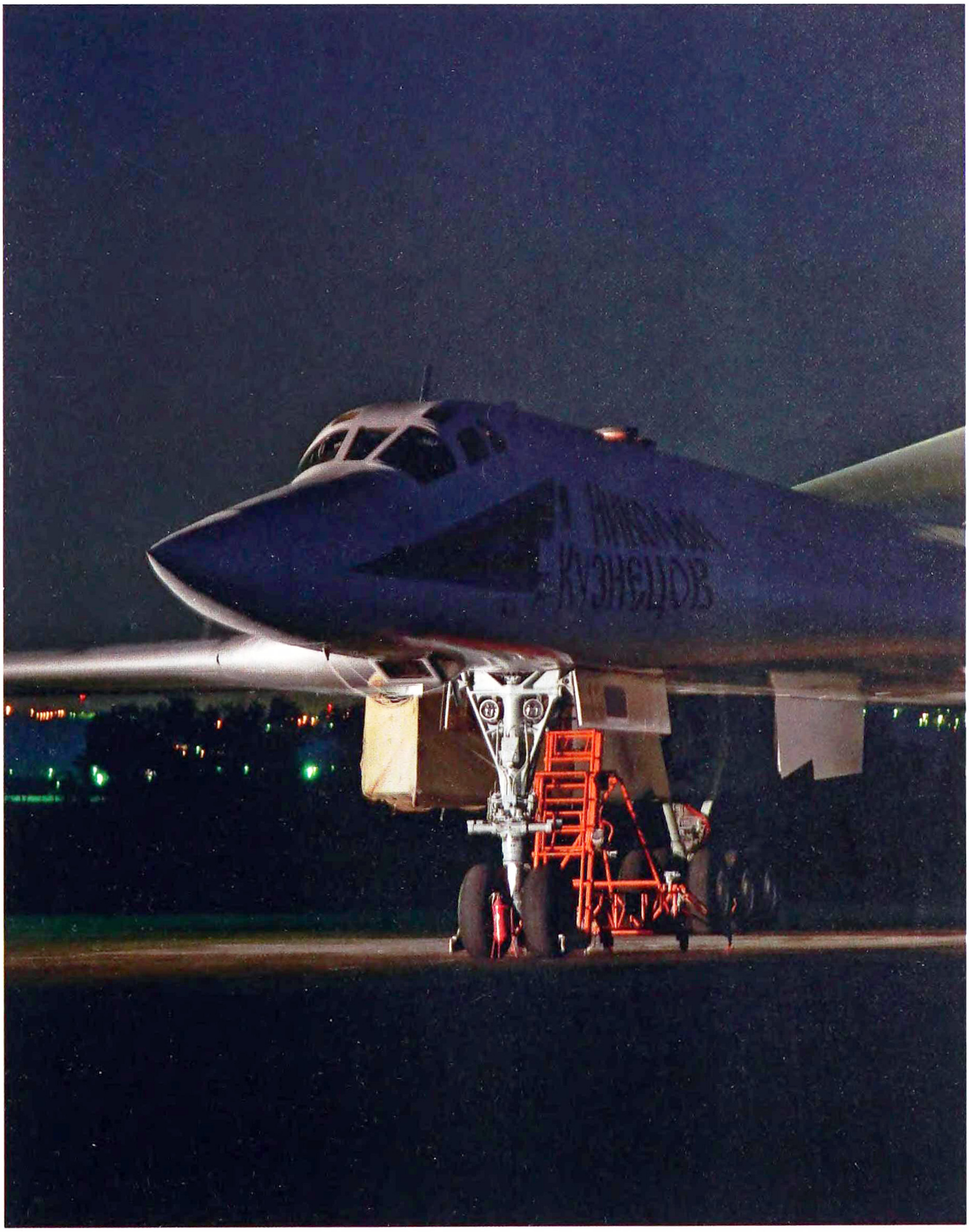
Force'. Thus the Venezuelan mission, including the training flights over the Caribbean, must have cost at least RUR 35 million.

For the Venezuelan mission the participating personnel received Russian government awards. After the award ceremony in the Moscow Kremlin the Long-Range Aviation Chief of Staff Maj.-Gen. Anatoliy D. Zhikharev told the *Izvestiya* daily: *'When this weapons system was being introduced into service, I was one of the first pilots to master the bomber. Now I am probably one of the 'old-timers' still flying these aircraft [from those days].'*

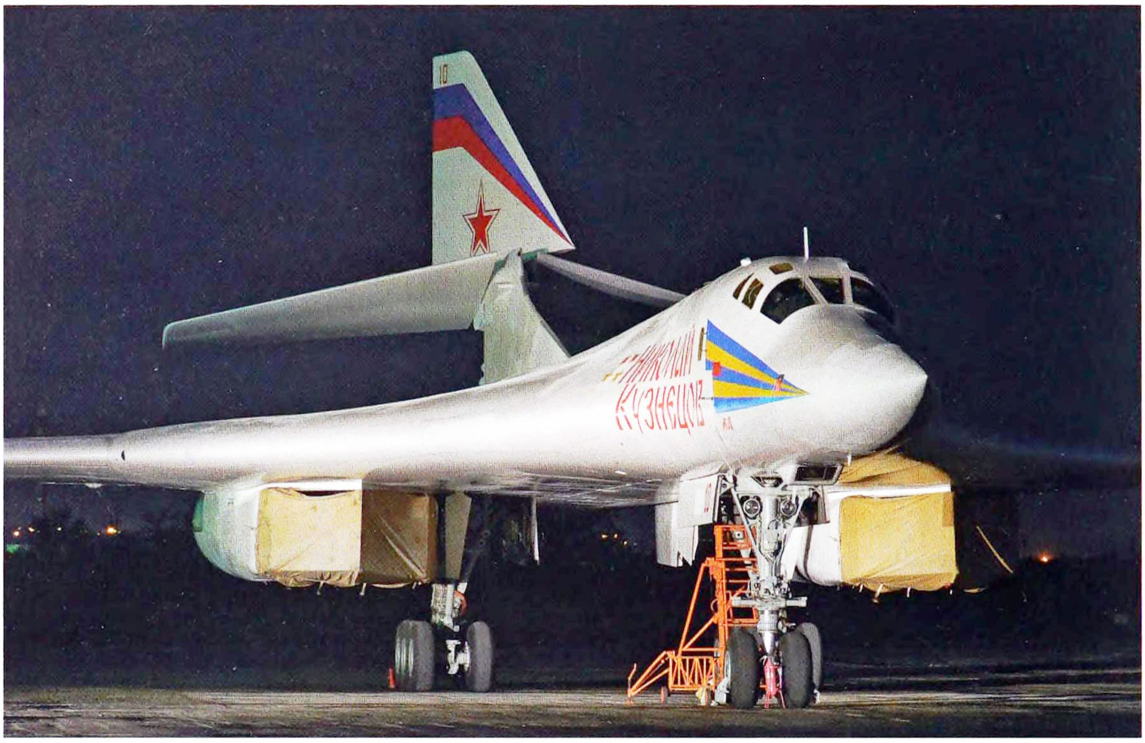
When asked how the idea of the Venezuelan mission came about, Zhikharev replied, *'It was the Supreme Commander-in-Chief's* (President Dmitriy A. Medvedev's – Auth.) *decision. We decided to show that the Americans are not the only ones who can perform "humanitarian" missions near our shores.'*

Zhikharev had headed a Russian military delegation which had flown to Venezuela to hold preliminary negotiations concerning the mission. After visiting the Venezuelan Air Force base on Archila Island the delegation was



'10 Red' *Nikolay Kuznetsov*, the third *Blackjack* which had taken off from Engels on 9th September but then turned back.

Another atmospheric night shot of '10 Red'.



Needless to say that the Tu-160s chosen for the Venezuelan mission sported a perfect surface finish.

Aleksandr Afinogentov and the other crew members are interviewed by the Russian TV channels on arrival at Engels.

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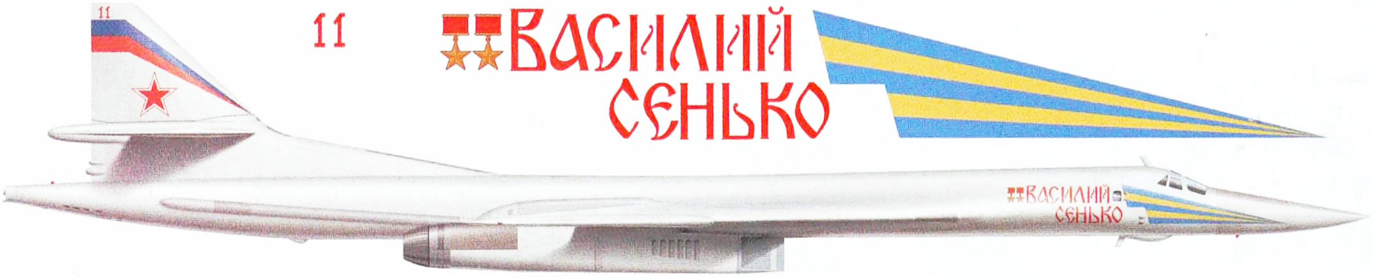
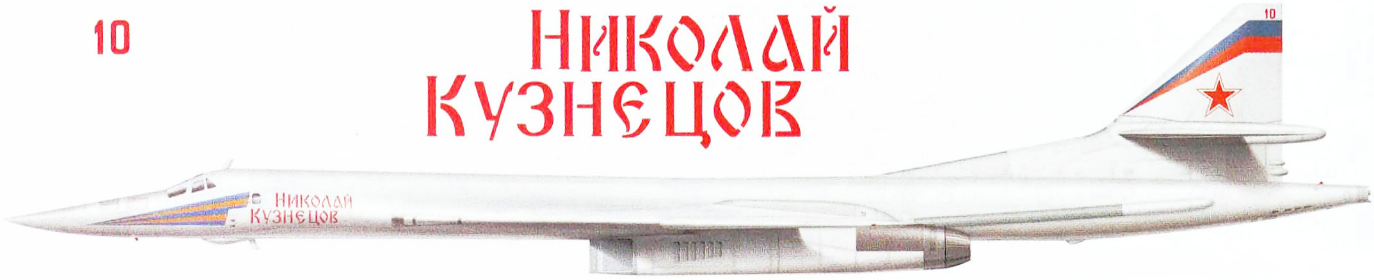
10

Tu-160 '11 Red' *Vasiliy Sen'ko* which flew to Venezuela on 10th-19th September 2008



Tu-160 '10 Red' *Nikolay Kuznetsov*; the back-up aircraft for the mission



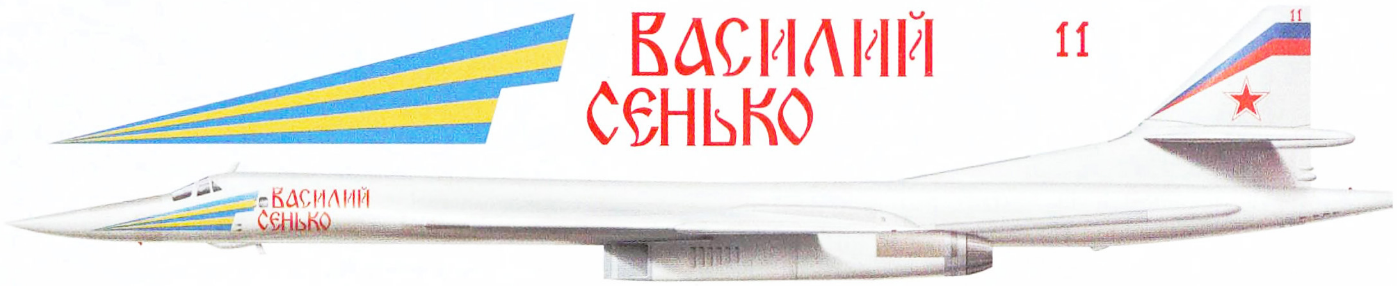
satisfied to find that, after a minor reconstruction, the base would be suitable for Russian strategic missile carriers operating in maximum take-off weight configuration. *'The runway was 3,200 m [10,500 ft] long and we needed to extend it by 300 m [990 ft]. Of these, the [existing] hardstand would account for 200 m [660 ft], so all we needed was to surface another 100 m [330 ft] of earth with concrete.'*

'When I met the Venezuelan President Hugo Chávez – Zhikharev recalls – *he asked me how the "Yanquis" would react to the appearance of Russian strategic bombers in the area. "They're bound to raise hell", I told him. "That's good", he said.'*

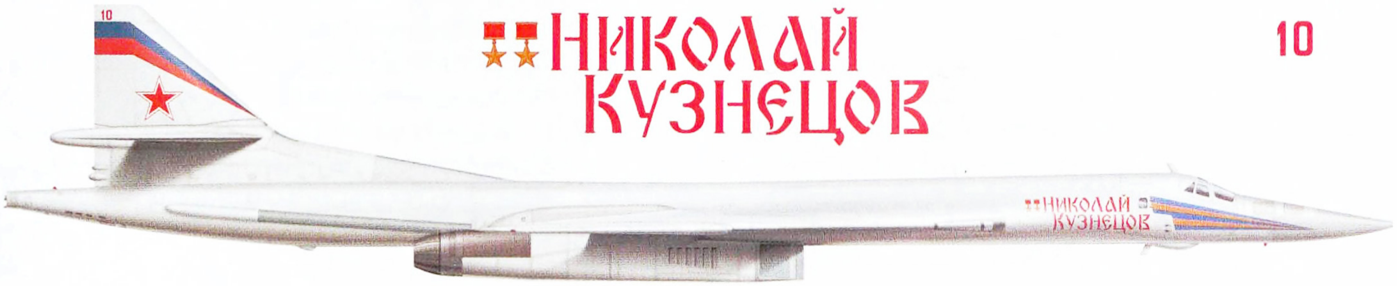
Actually organising the Tu-160s' flight to Venezuela involved a whole deal of problems. *'The approach systems at our bases and theirs are totally different* – the General said – *We*

The guard detail watches as *Vasiliy Sen'ko* is pushed back to its hardstand after taxying in.

Port side view of Tu-160 '11 Red'



Starboard side view of Tu-160 '10 Red'



had to bring in our ground beacon, and it weighs several tons. Additionally, I plotted a GPS track [for the approach to the base]. By the way, on the second day of our deployment the Americans deprived us of the ability to use GPS – they simply shut down the satellite signal.'

A little thing like this did not dismay the Russian military. According to Anatoliy Zhikharev, the birds (presenting the danger of birdstrike) and storm fronts were worse. In Venezuela no one gives a damn about bird control at airfields – not even at Maiquetia international airport where the Tu-160s were based. (This is the civilian name of the airfield otherwise known as El Libertador AB – *Auth.*) The cumulus clouds also gave the pilots a surprise; nobody had expected that in the southern latitudes they would form so quickly – and dissipate just as quickly. Also, in Russia cumulus

A heartfelt welcome for the tired aviators.

clouds are not encountered above 8,000 m (26,250 ft), whereas in Venezuela you may run into them right up to 14,000 m (45,930 ft). Yet, these 'technical problems' did not stop the Russians from reaching Venezuela and performing several sorties along the US coast from Venezuelan territory.

'It takes 13 hours to reach the USA [from Russian bases], and even with in-flight refuelling the Tu-160 can stay close to the US coast for no more than an hour and a half, – Zhikharev explained. – *There* (in Venezuela – *Auth.*) *we were able to stay close to them almost as long as we wanted.'*

When asked what the NATO countries' reaction was, the General smiled. *'That was simple. They know when and where we are going to pop up, and so they maintain a constant watch in several points over the North Atlantic. They're so punctual you may check your watch by the appearance of their fighters. No sooner you have reached the designated square on the grid map, bingo! – you've got an escorting fighter on either side.*

However, the flight to Venezuela was something out of the ordinary for the NATO. They did intercept and escort our fighters on the way there, but on the way back out aircraft did not show up when expected.' (As mentioned earlier, the Tu-160s stayed in Venezuela longer than anticipated – officially at President Chávez' request.)

'For the Long-Range Aviation crews this was an invaluable experience – Zhikharev continues. – *For the first time we were flying over unfamiliar territory and still performing our combat training tasks. It's all the more important because in the future such flights may be done on a regular basis. Hugo Chávez has even offered us to use the airfield on Archila Island. Anything is possible, providing the appropriate political decisions are taken.'*

Now that the first experience has proved successful, the Tu-160s are ready for deployment abroad.

The Russian press generally assessed the Venezuelan mission as another high-complexity drill of the DA crews and a show of force in response to the NATO exercise in the Black Sea. Some papers, however, went in for some purely Cold War-era Soviet-style rhetoric:

'At present there is a naval base and an airbase on Archila Island. Providing some runway extension work is done, our "White Swans" (the Russian popular name of the Tu-160 – *Auth.*) *may be based there. As for Cuba, it is even easier; "Freedom Island"* (as Cuba used to be called in Soviet days – *Auth.*) *has four or five airfields whose runways are long enough for our strategic aircraft...'*

Actually the Russian media had been speculating on the possibility of Russian strategic bombers using auxiliary airfields on Cuba long before the *Blackjacks'* Caribbean mission. To date there have been no such deployments, but the CO of the 22nd GvTBAD based at Engels, Maj.-Gen. Aleksandr Blazhenko, does not rule them out. *'I believe we will be looking for other partners as well* – he said at the welcoming ceremony after the mission – *We'll be flying over other areas of the world ocean as well. It's just a matter of time.'*

Apparently the USA doesn't rule this out either. The visit of the Russian bombers to Venezuela clearly left the White House confused.

Russian MoD spokesman Aleksandr Drobyshevskiy had declined to say how long the Venezuelan deployment would last or whether the Tu-160s were carrying any weapons. However, when it became known with certainty that there were no nuclear weapons on board the bombers, US officials adopted a more relaxed attitude. In an interview to Associated Press on 15th September Condoleezza Rice said, *'A few aging* Blackjacks *flying unarmed along the coast of Venezuela is – I don't know why one would do it, but I'm not particularly going to lose sleep over that'.* A day later US Navy Rear Adm. Tom Meek, the Deputy Director for Security and Intelligence at Southern Command, said, *'I don't think that Russia and Venezuela are really serious about putting together a military coalition that would give them any kind of aggregate military capability to oppose anybody. Frankly, the manoeuvres they conducted down here were so basic and rudimentary that they did not amount to anything, in my opinion.'*

ВАСИЛИЙ
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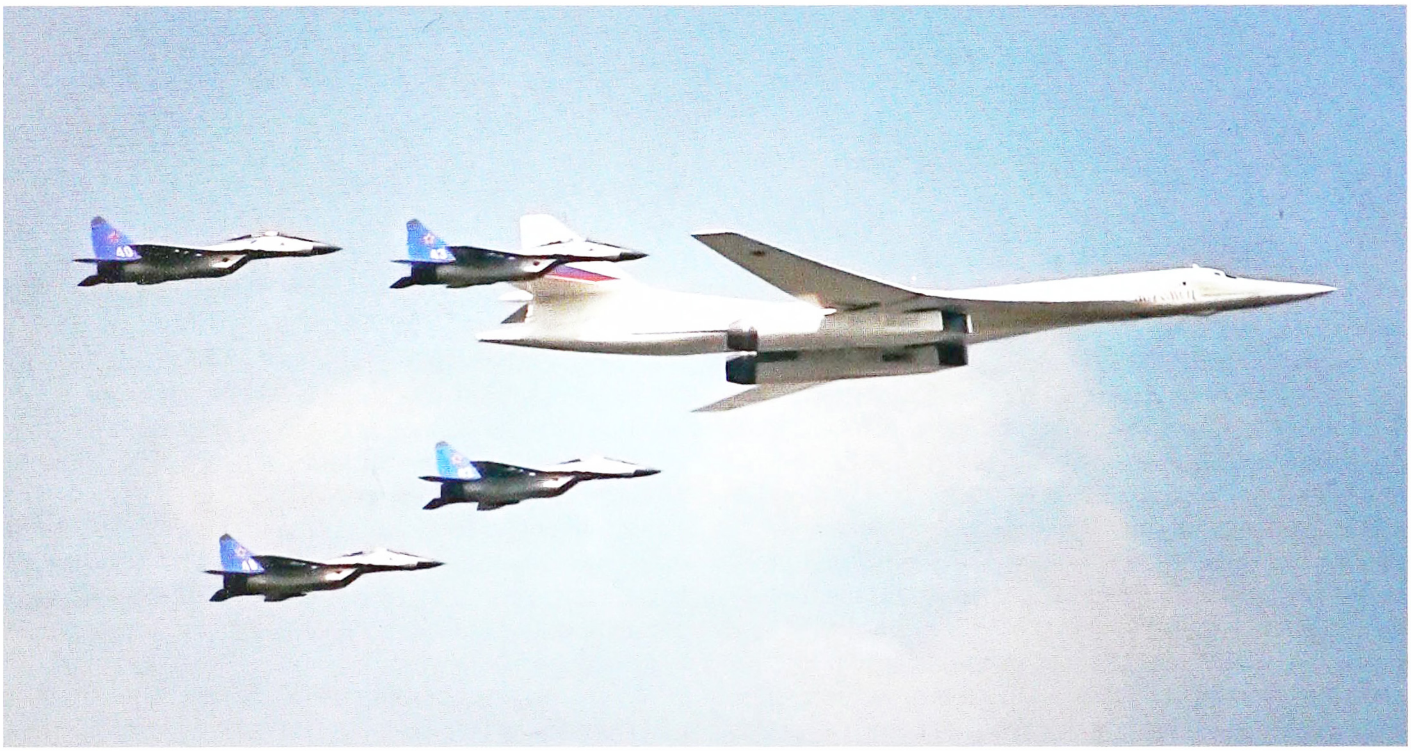
Showtime

In the mid-1980s a wave of democratic reform swept some of the Eastern Bloc countries. Democratic reforms gradually began in the Soviet Union, too. After Mikhail S. Gorbachov became the new leader of the USSR in 1985, fundamental changes took place not only in the nation's home and foreign policy but in the military sphere as well. All of this led to the disintegration of the Warsaw Pact military bloc, the demolition of the Berlin Wall, and the signing of new international treaties limiting not only strategic offensive arms but also conventional forces and arms in Europe. In keeping with the agreements reached with the West, the Soviet Ministry of Defence prepared albums featuring photos in various aspects and performance data of various types of Soviet weapons and military hardware, including combat aircraft. All basic types and versions of fixed-wing aircraft and helicopters in service with the Soviet Air Force were photographed in various views, including the upper view; in each photo an obligatory scale ruler was placed near the aircraft, allowing its dimensions to be defined and making it possible to monitor the presence of this or that aircraft type on airbases throughout the territory of the USSR, using surveillance satellite imagery. The NATO command was supplied not only with exhaustive data on Soviet military hardware but also its correct Soviet designations. The veil of total secrecy that had shrouded the Soviet Armed Forces began to be lifted, little by little.

After the disintegration of the Soviet Union in 1991, when Boris N. Yel'tsin became the first President of Russia, the Russian government took one more step towards greater openness in military matters and closer military-political cooperation with the West. Starting in 1992, aircraft and crews of the Russian Long-Range Aviation took part in many demonstrative actions not associated with exercises or combat duty: that is, various air events and shows, military technology displays, parades; they also



A Tu-160 named *Il'ya Muromets* ('05 Red' or '06 Red') is escorted by four MiG-29s in the old livery of the Strizhi display team at an air event in the 1990s.

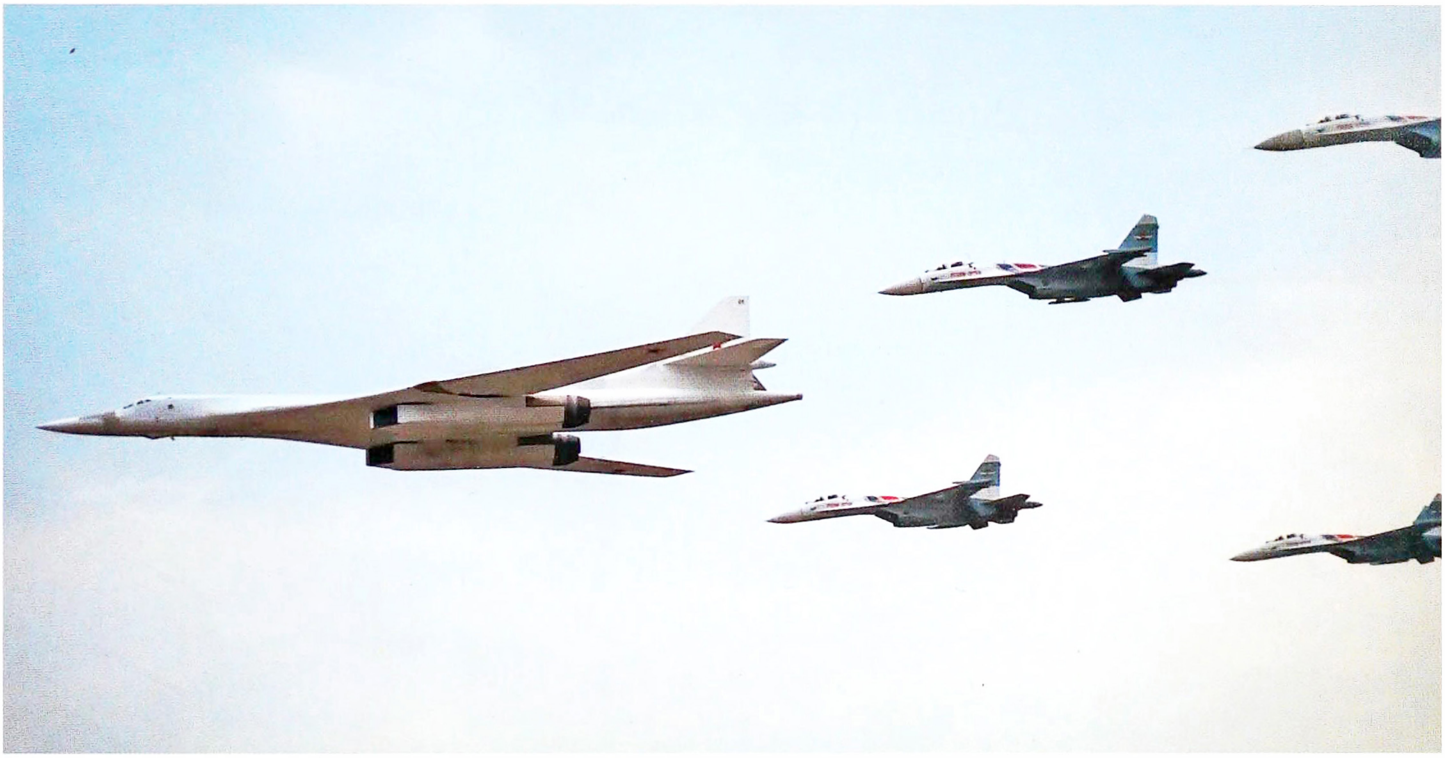
Previous page: This Tu-160 making one of the type's first public appearances, with two Su-27s flying escort, looks a bit drab in its simple white livery without the later colourful nose and tail markings.

paid friendly visits to several countries, accepting the invitation of their defence ministries. In turn, Russian airbases also began to host military delegations from former 'potential adversary' nations. Whereas aviation exhibitions and air parades were meant to confirm that the Long-Range Aviation was very much alive (which was important for the new Russian political leaders and the Ministry of Defence, as it boosted morale on 'the home front'), the participation in international events and the exchange of visits pursued, to a greater extent, political and diplomatic goals. On the one hand, such visits were meant to show that Russia was still able to defend itself adequately during the armed forces' restoration and reorganisation period in spite of the most severe economic crisis to hit the country; on the other hand, they demonstrated Russia's openness in the field of military politics and the lack of aggressive intentions with regard to the former Cold War opponents.

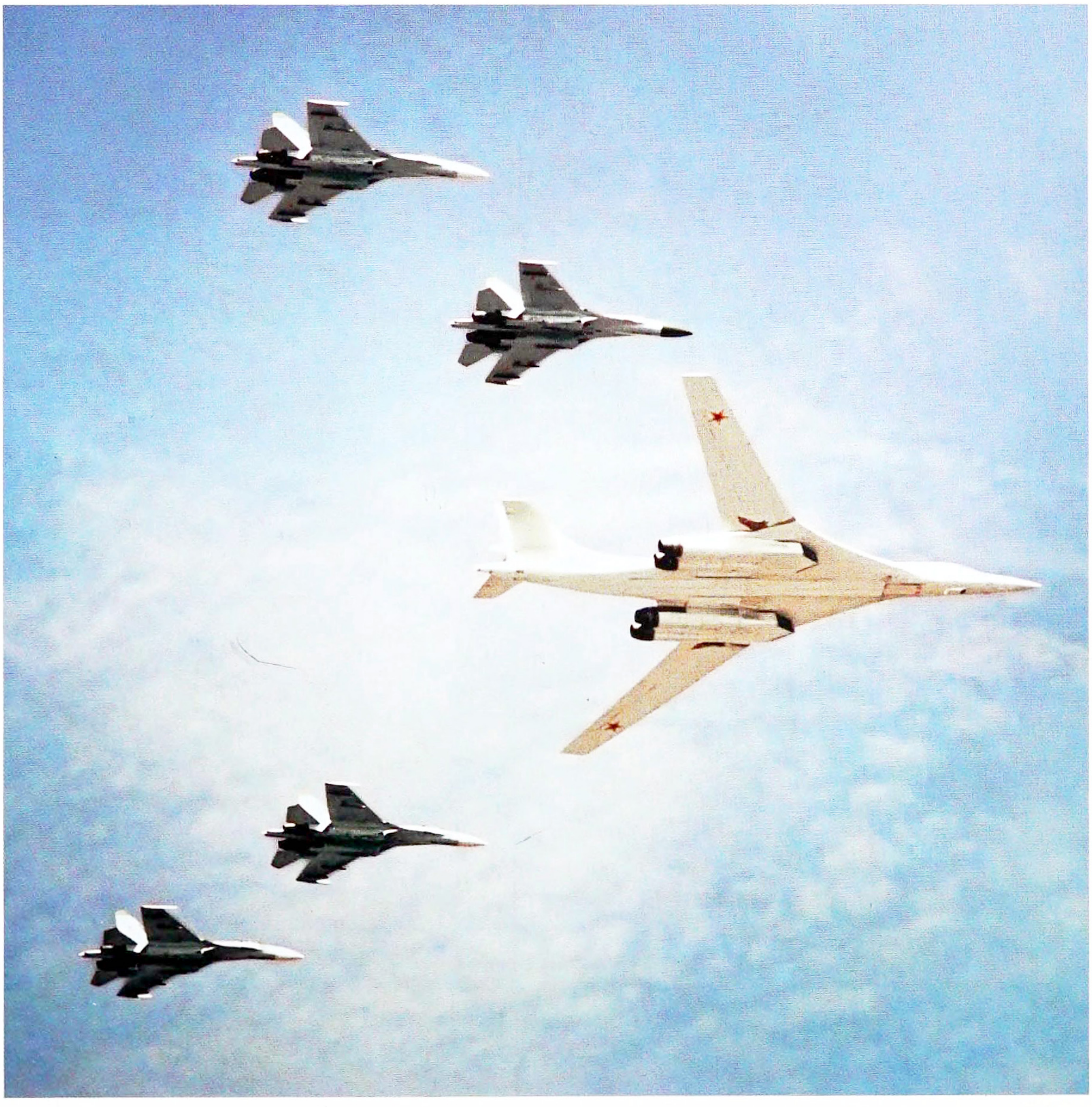
In 1992 Kubinka AB, the 'showcase base' that had been off limits to the general public until then, started a tradition of holding 'open houses', allowing hundreds of aviation enthusiasts to see current operational Russian Air Force aircraft up close and personal. The first such event took place on 11th April 1992 and was apparently linked to Spaceflight Day which was/is celebrated in the Soviet Union/Russia on 12th April, the date of the first manned space flight. The weather literally watered down the festivities a bit, with brief but frequent blizzards leading to annoying interruptions in the flying display. Yet the public did have a chance to see a Tu-95MS in a simulated refuelling formation with IL-78 *sans suffixe* '34 Blue', followed by a pair of Tu-22M3s carrying Kh-22M missiles and, finally, a Tu-160 which made a high-speed dash. Another *Bear-H* was parked in front of the display base hangar for close inspection.

On 6th May 1992, two 182nd GvTBAP Tu-95MSs coded '34 Black' (c/n 35363) and '36 Black' (c/n 35793), supported by an Antonov An-124 Ruslan strategic transport, ('09 Black') paid a courtesy visit to Barksdale AFB, Louisiana, which was home to the Strategic Air Command's 2nd Bomb Wing. This was a return visit for the March 1992 visit by two B-52s and a supporting McDonnell Douglas KC-10A Extender tanker to Dyagilevo AB. The *Bears* were captained by deputy Commander of Squadron 1 Pilot 1st Class Maj. A. I. Pechatnyy and a detachment commander from the same squadron, Sniper Pilot Maj. Yu. I. Popel'nukha. This was the first-ever foreign visit by the Tu-95. The 58-strong Russian delegation stayed for six days, seeing a slice of America and participating in Strategic Air Command's final Bombing and Navigation Competition awards symposium.

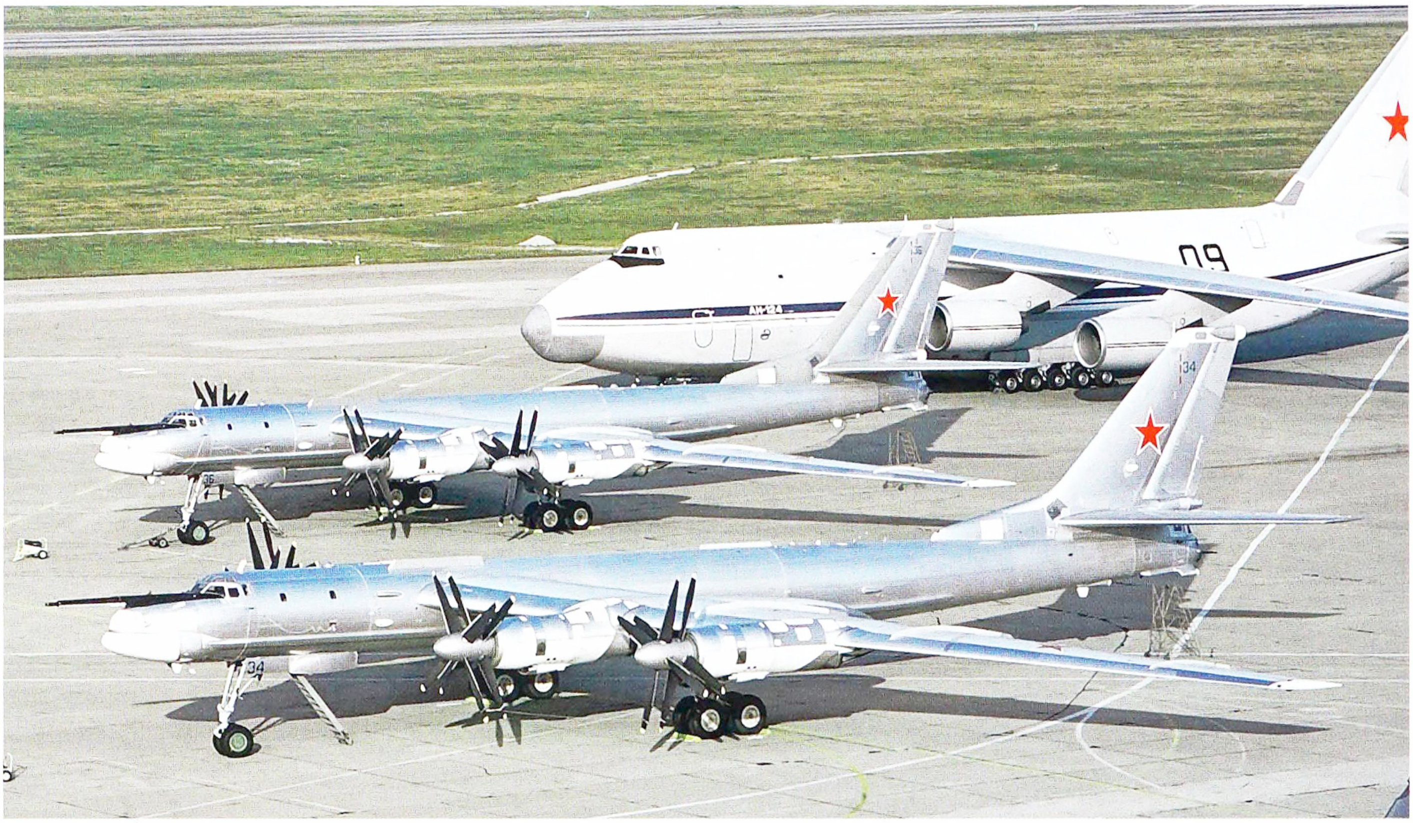
On 14th May 1994 another 'open house' was held at Kubinka. This time the weather was fine; the static display did not feature any heavy bombers, but the day's flying programme included a *Bear-H*, a *Backfire-C* and a



Tu-160 '01 Red' is escorted by four Su-27s of the Roosskiye Vityazi team as it makes a flypast during an 'open house' at Kubinka AB.



The same *Blackjack* accompanied by more *Flanker-Bs* – this time in standard Russian Air Force camouflage.



182nd GvTBAP Tu-95MSs '34 Black' and '36 Black' and An-124 '09 Black' visiting Barksdale AFB in May 1992.

The visiting Russian *Bears* evoked great interest at Barksdale.

Blackjack. The latter was coded '01 Red' and was apparently the aircraft that would later be named *Mikhail Gromov* and would be tragically lost on 18th September 2003.

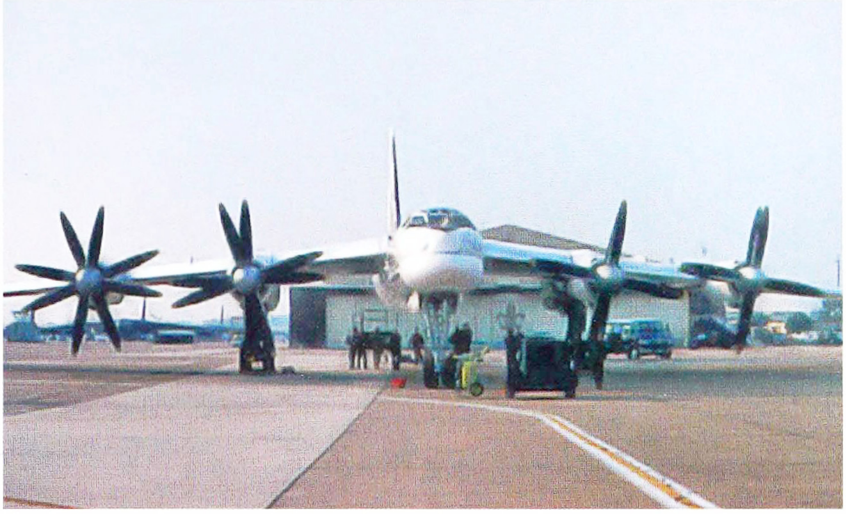
On 21st August 1994 a 182nd GvTBAP Tu-95MS supported by an IL-78 visited Barksdale AFB again; the aircraft was captained by Lt.-Col. K. A. Yepifanovskiy. As a USAF serviceman who witnessed these events put it, *'they* (the Russian airmen – *Auth.*) *spent about a week here each time, and they absolutely* ***hated*** *to leave – and to be honest, we really hated to see them go. They're just like us in many ways. The Barksdale and Bossier City/Shreveport communities really rolled out the red carpet for the* Bear *and An-124 (1992), and IL-76 (1994) crews both times.'* There was a lot of informal contacts between the Russian and US pilots – right down to swapping items of flight clothing as souvenirs!

In 1993 another 182nd GvTBAP Tu-95MS, '20 Black' (c/n 34108) captained by Squadron 2 Deputy Commander Maj. V. S. Zemnukhov, plus IL-78 '34 Blue', represented the Russian Air Force at the Royal International Air Tattoo '93 at RAF Fairford, Gloucestershire, becoming one of the stars of the show. The scenario was repeated in July 1994 at RIAT '94 and Farnborough International '94 when the regiment put up Tu-95MS '23 Black' (c/n 34379), again captained by Zemnukhov.

On 9th May 1995 a tremendous military parade was held in Moscow to celebrate the 50th anniversary of the Soviet Union's victory in the Great Patriotic War against Nazi Germany. In a departure from tradition, the parade was held at Poklonnaya Gora in the western-central part of the city, not in Red Square. Hence the participating aircraft approached the city from the west, flying along the Mozhaisk Highway and Kutuzovskiy Prospekt (Kutuzov Avenue). For the first time in many years the V-Day parade included a large Air Force component. The Long-Range Aviation was also involved, putting up one

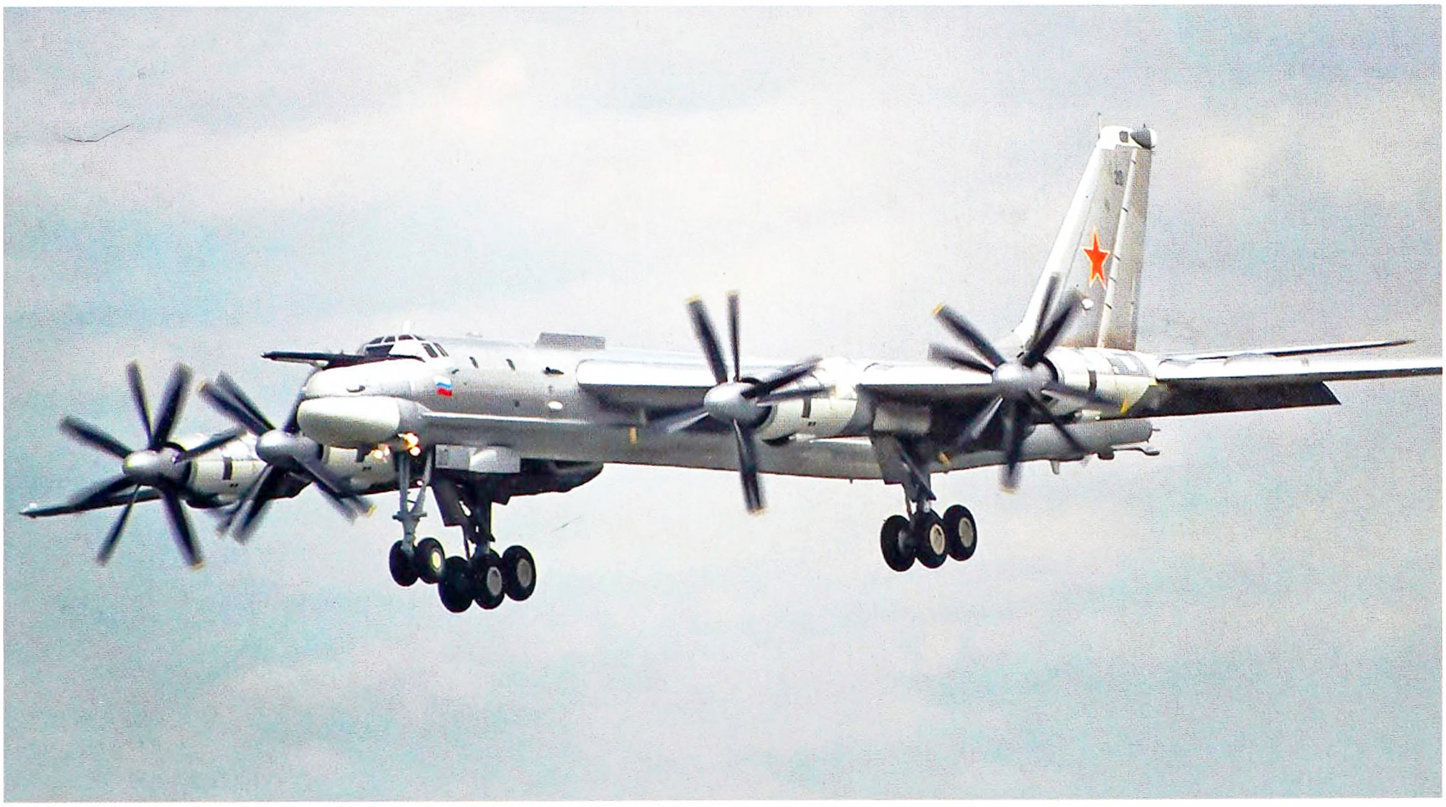
Tu-95MS (plus one more in hot reserve), one Tu-160 (plus one more in hot reserve), three Tu-22M3s in line astern formation (plus two in hot reserve), two IL-78M tankers (plus one in hot reserve). The *Bear-H* and *Blackjack* formated with the tankers to simulate the in-flight refuelling procedure. All in all, the air parade over Poklonnaya Gora involved 79 combat helicopters and aircraft. Two days earlier the same formation had passed over the city during the dress rehearsal for the parade.

It may also be mentioned that in the 1990s the DA's Tu-95MSs, Tu-22M3s and Tu-160s participated in the traditional Aviation Day air events held at Moscow-Tushino.

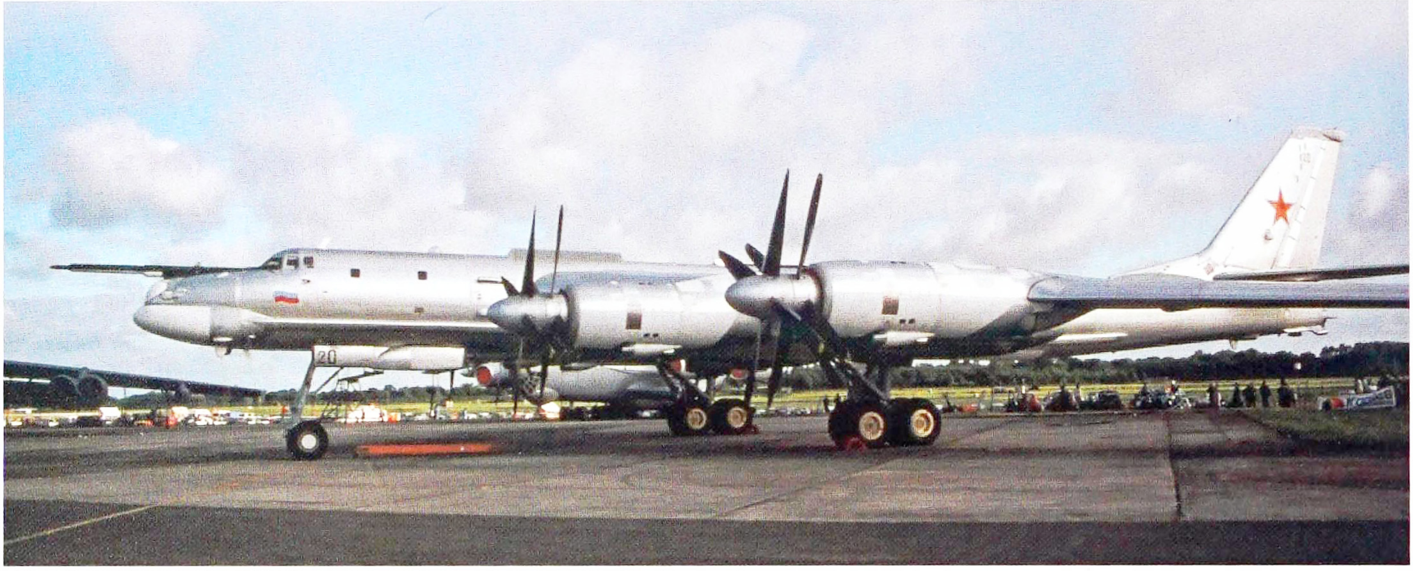


Another 182nd GvTBAP Tu-95MS at Barksdale AFB in August 1994.

Tu-95MS '20 Black' makes a low pass over runway 27 at RAF Fairford during RIAT '93.

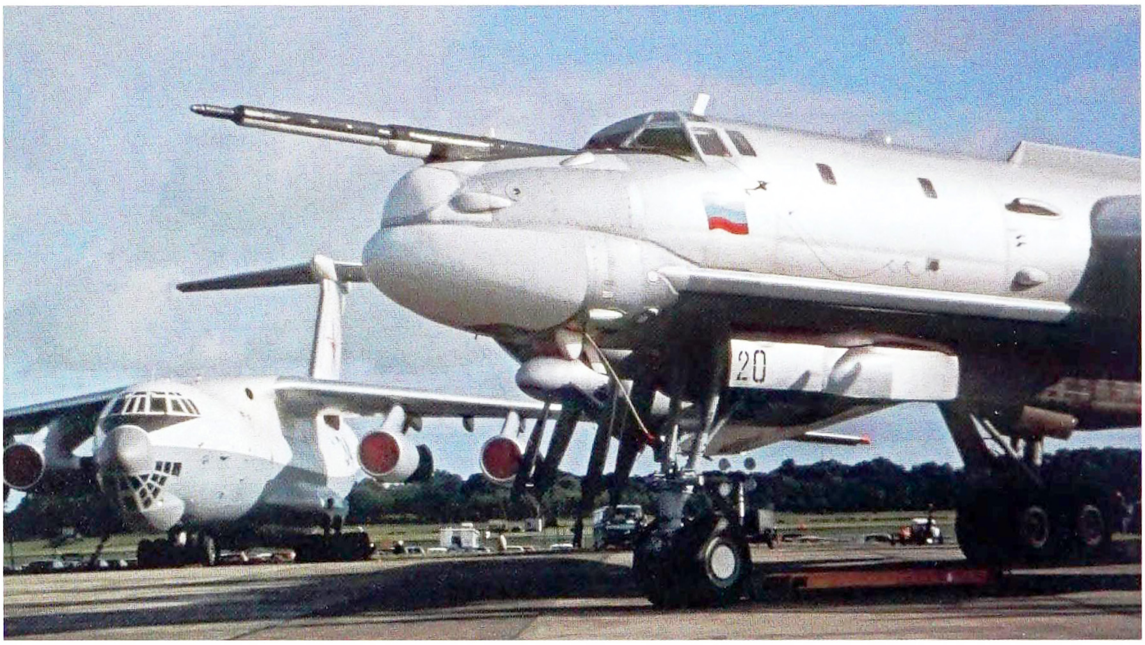


The same aircraft makes a majestic landing approach following its demonstration flight.

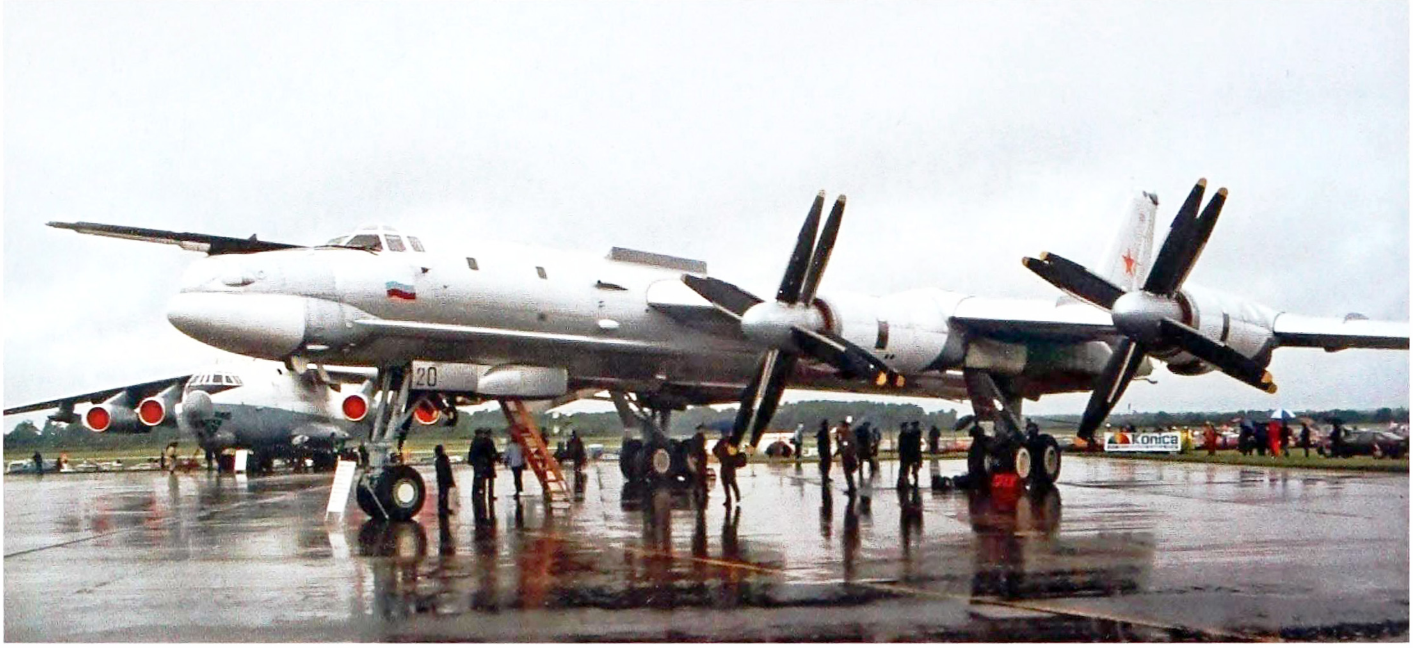


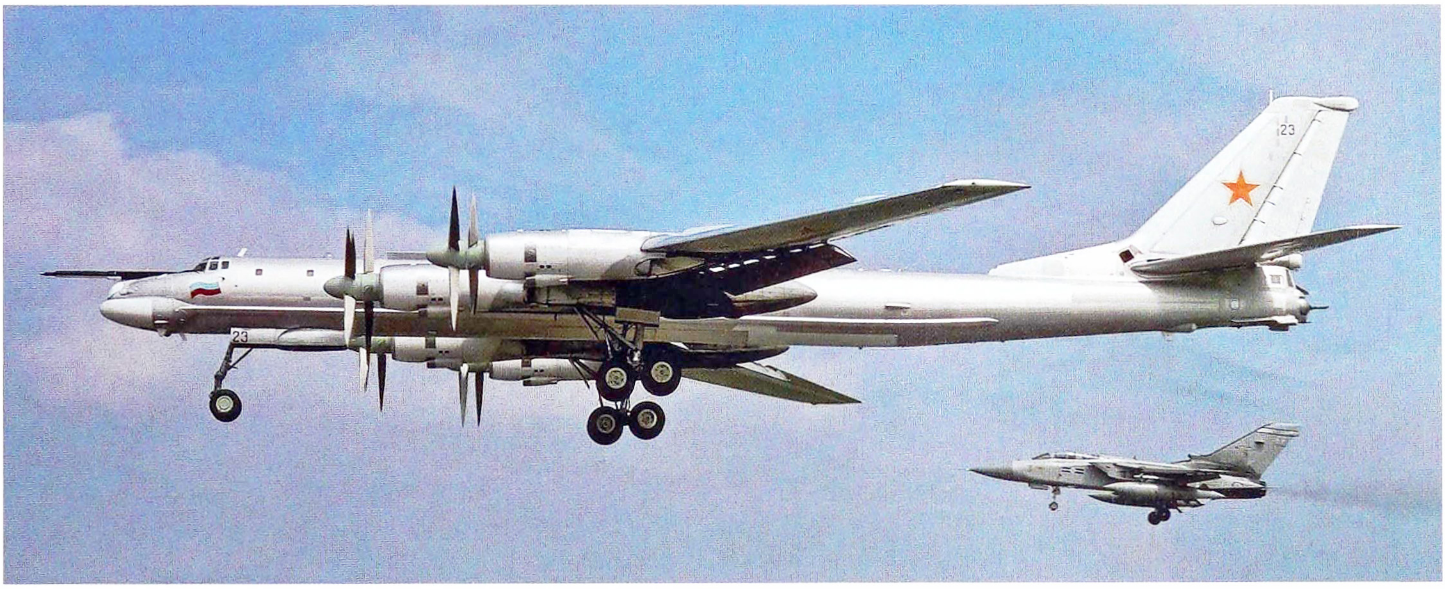
Here Tu-95MS '20 Black' is seen in the static park of RIAT '93 alongside a B-52H.

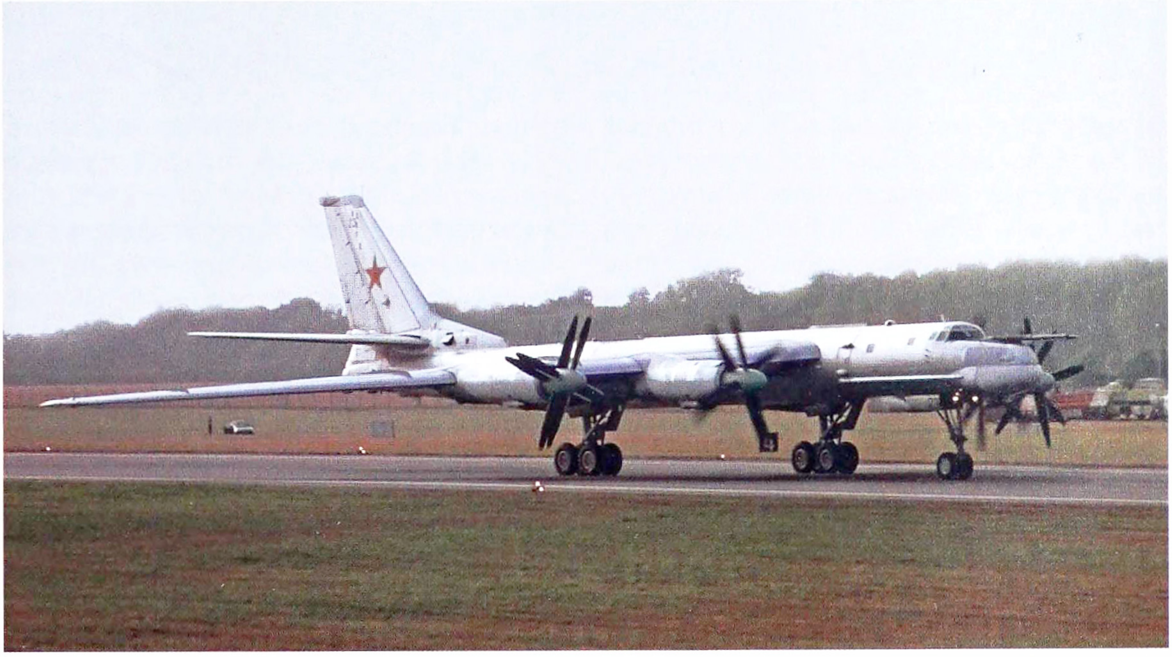
The *Bear* had IL-78 '34 Blue' to keep it company at Fairford.



Fairford is notorious for its fickle weather; here the the *Bear* and the *Midas* have just experienced a British downpour.



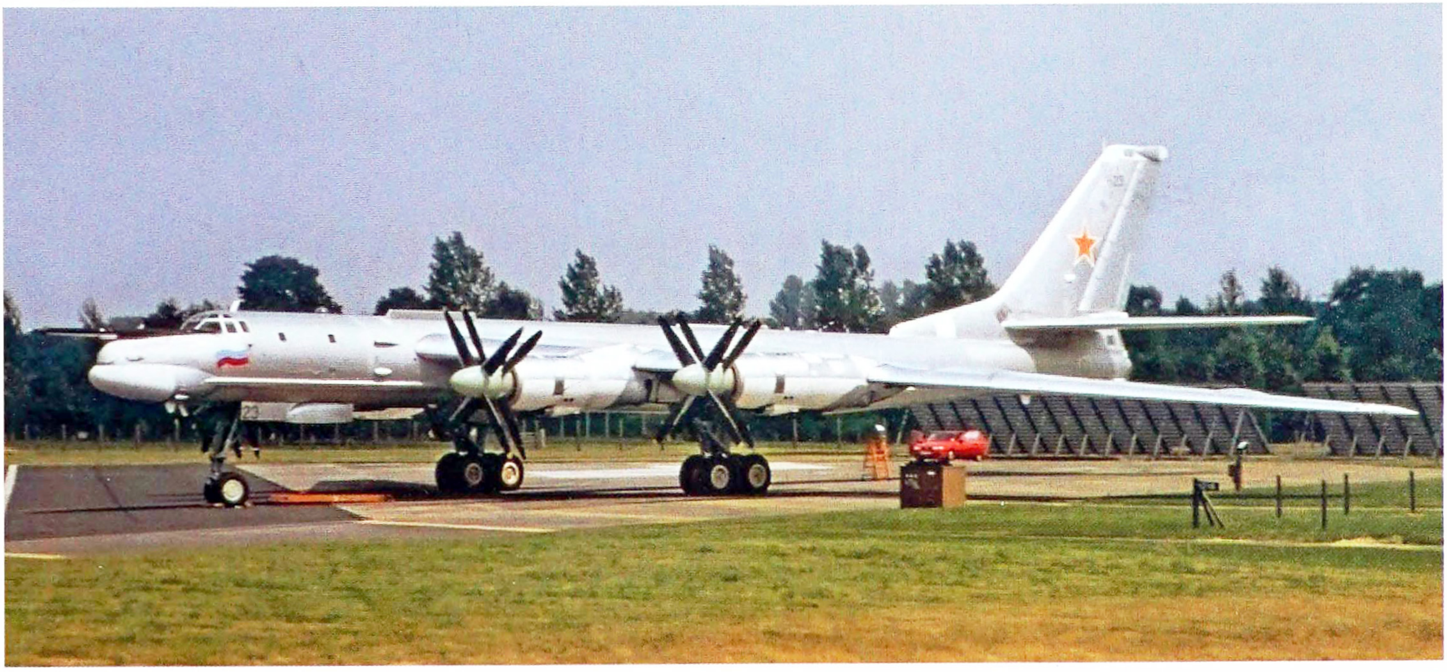


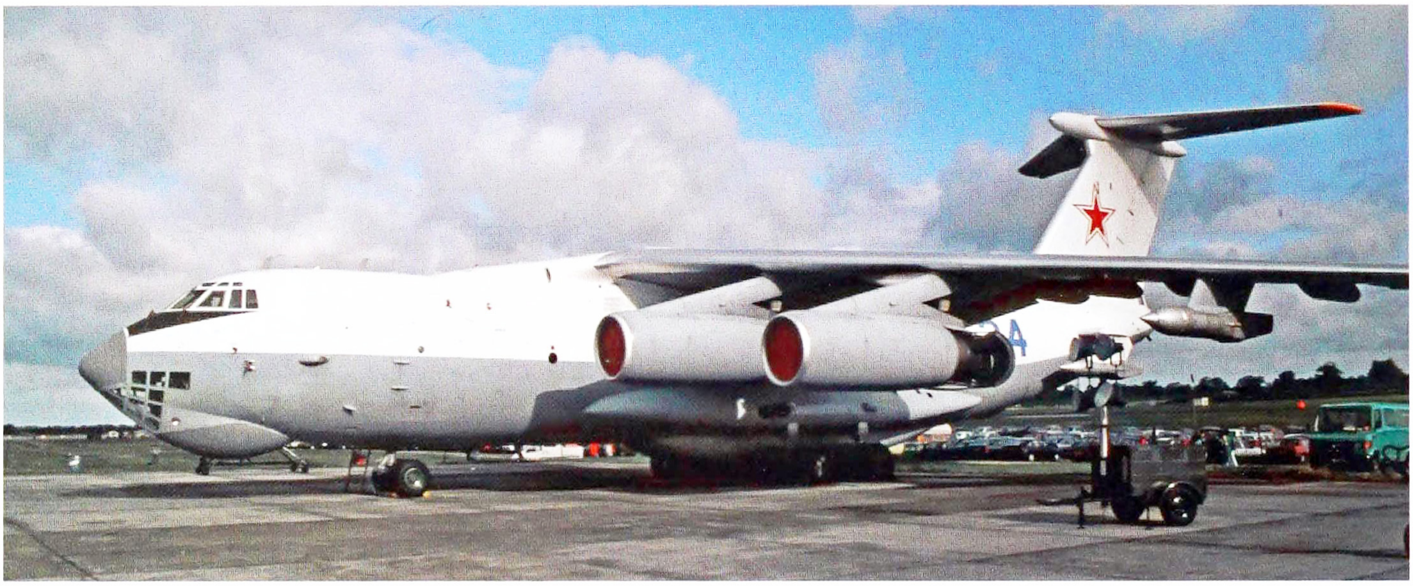


Tu-95MS '23 Black' comes in to land at RIAT '94, escorted by Tornado F.3 ZE787/FF.

After landing, the Tu-95MS back-tracks along runway 09 before being directed to its hardstand.

Here, '23 Black' sits parked on the north apron at RAF Fairford.

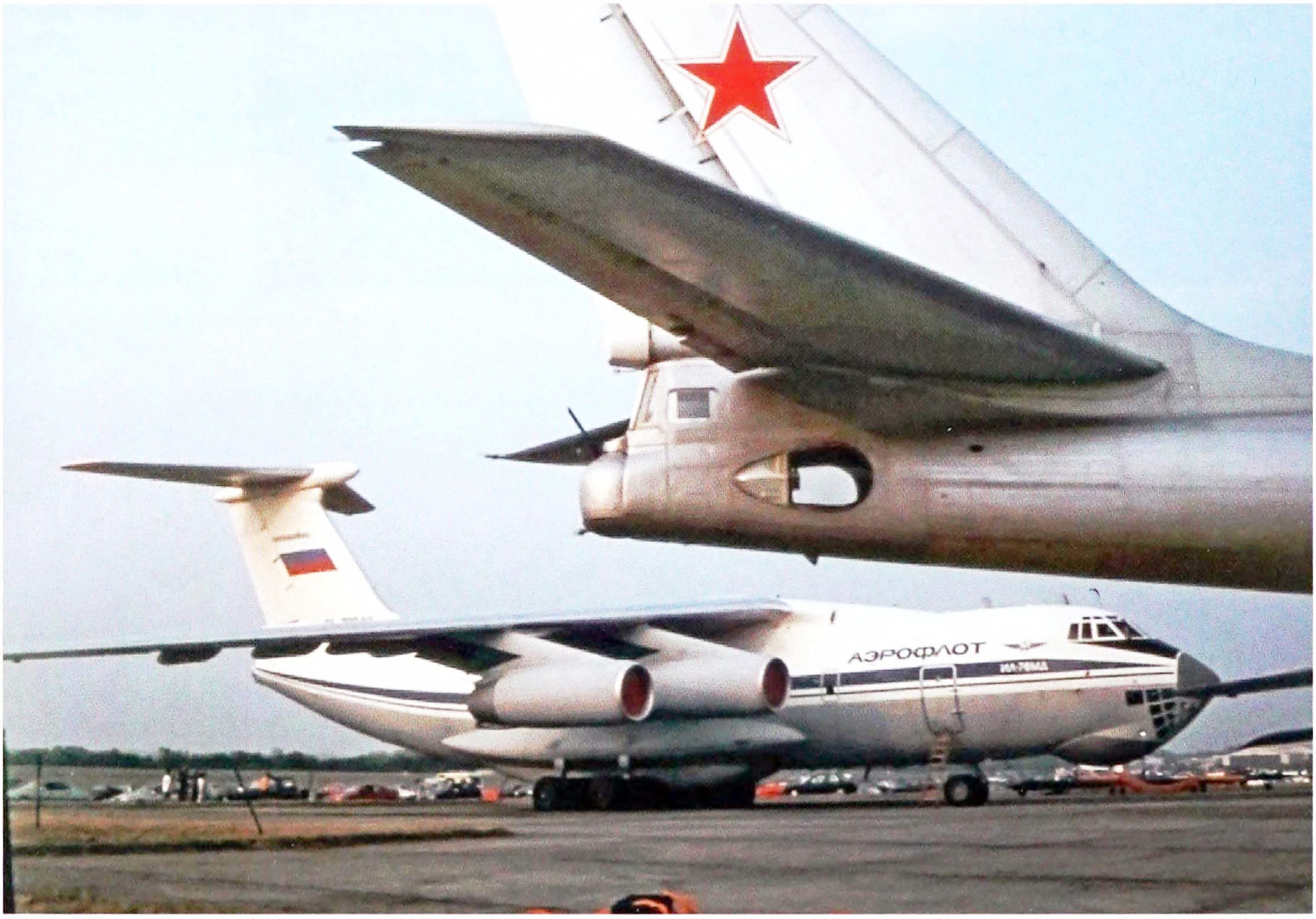




IL-78 '34 Blue' on the south apron at Fairford during RIAT '93.

At RIAT '94 the *Bear* was supported by a Russian Air Force IL-76MD.

On 20th August 2001, accepting an invitation from the Russian Ministry of Defence, a six-man American military delegation led by Lieutenant General Thomas Keck, commander of the USAF's 8th Air Force, paid a six-day visit to Russia to promote military-to-military contacts. Among other Russian Air Force bases the delegation visited the Long-Range Aviation's 43rd Combat Training & Aircrew Conversion Centre at Dyagilevo AB on 22nd August. There the general was given a familiarisation flight in a Tu-22M3 long-range bomber, becoming the first NATO serviceman to fly the *Backfire*. The Tu-22M3 dropped bombs on a practice range. After landing at Dyagilevo the Russian pilots gave Keck a shot of vodka, then grabbed his arms and legs and swung him, bumping his backside against the



A shiny new and uncoded Tu-22M3 (c/n 12112347) is handled by a tug after arriving for Farnborough International '92.

aircraft's nosewheels in an initiation ritual that is often inflicted on newcomers. Lt.-Gen. Keck took all this with good humour, as similar traditions existed back home. *'Sometimes you get very wet being dumped in water, sometimes your neck tie is cut off, sometimes even a tail of your shirt is cut off'*, he said. (Here it should be noted that Thomas Keck is a former SR-71 pilot, and the tie-cutting ceremony was one of many traditions perpetuated by Blackbird crews.)

In addition to the 43rd TsBP i PLS, the US delegation visited the bomber regiments in Engels and Sol'tsy in the Novgorod region. The Americans were also given a flight in an IL-78 tanker, thus receiving the same treatment as the Russian Air Force delegation that visited Texas in 2000; on that occasion the then Commander of the Long-Range Aviation Lt.-Gen. Mikhail M. Oparin (who accompanied Keck during his visit to Russia) had flown in the Rockwell B-1B Lancer bomber and the Boeing KC-135 Stratotanker. Keck also took the opportunity to try his hand in the simulator of a Tu-160 strategic bomber.

'I was very impressed with everything from the beginning, from the ground crew preparing the aircraft to the aviators in the sky, the ones who make it all happen', Thomas Keck told reporters after meeting Russian Air Force C-in-C Anatoliy Kornukov in Moscow. *'The opportunity to see your units firsthand and fly your aircraft has been incredible – something I will never forget for the rest of my life.'* Kornukov said that, apart from the official side of the visit, the unofficial meetings with pilots and air force officers were also important and pledged friendship between Russian and US military aviation professionals. *'Our meetings are a guarantee that we will not be looking at each other through the crosshairs of a gunsight, but rather facing each other like we do now'*, he said.

On 5th August 2002 the President of Russia Boris N. Yel'tsin visited Engels-2 AB, examining the operational aircraft of the Long-Range Aviation and their weaponry. By then, thanks to the successful recovery of 11 aircraft from the Ukraine, two regiments were operational in Engels, one operating Tu-160s and the other unit flying Tu-95MSs. The Long-Range Aviation personnel stated to the President their satisfaction with the increase in the numerical strength of the strategic missile carrier fleet; however, they also voiced complaints concerning the constant fuel shortages and the unsatisfactory pay rates they were receiving for their hard work.

One year later, the static display of the MAKS-2003 airshow held in Zhukovsky on 19th-24th August included a 121st GvTBAP Tu-160 from Engels coded '03 Red' and named *Pavel Taran*. This was the first case when an operational *Blackjack* was displayed at a Russian air event for the general public; previously, the Tu-160 displayed at the Moscow airshows had invariably been an aircraft owned by the Tupolev PLC. MAKS-2003 was also the first case when the USAF was present at the show: a Boeing B-52H of the 238th Bomb Squadron 'Barons' (61-027/MT *Vulture*) arrived on 20th August, and a

The *Backfire-C* in the static park at Farnborough, complete with a bilingual data placard.

USAFE/100th Aerial Refueling Wing KC-135R (62-3561/D) was parked across the flight line from the Tu-160.

On the opening day of the MAKS-2005 airshow (16th-21st August), the flying display was opened by five Tupolev machines – four company-owned aircraft (Tu-160 '342 Blue', a Tu-95MS, a Tu-204-100C freighter and the Tu-334 airliner prototype) and one Long-Range Aviation aircraft (Tu-22M3 '28 Red' of the 52nd GvTBAP from Shaikovka AB). The five aircraft passed over the runway in V formation, fanning out spectacularly at the end. The static park featured another Tu-160 – this time an operational example, '04 Red' *Ivan Yarygin*. Again, it was a case of 'East meets West': the USAF had brought the *Blackjack*'s counterpart to Zhukovskiy, with two 366th BW/34th BS B-1Bs from Ellsworth AFB (85-0060/EL *Dakota Posse* in the flying display and 86-0129 *Black Widow* in the static display), plus a supporting 349th Air Mobility Wing KC-10A (84-0191).

The static display at the MAKS-2007 airshow (21st-26th August) included two DA aircraft – Tu-95MS '16 Red' *Velikiy Novgorod* representing the 184th TBAP (the christening and consecration of this aircraft had taken place at Sol'tsy AB two months before the show, on 23rd June) and Tu-160 '11 Red' *Vasiliy Sen'ko* representing the 121st GvTBAP. Both 'heavies' had arrived from Engels-2 AB. A number of new aircraft were parked on a specially designated area of the hardstand for demonstration to President of Russia Vladimir V. Putin, who ceremonially inaugurated the airshow; these included another operational Tu-160, '19 Red' *Valentin Bliznyuk*, which had specially flown in for one day from Engels for the occasion. Additionally, a Tu-22M3 from Shaikovka AB again participated in the flying

One more view of the Tu-22M3 at Farnborough in July 1992.

Have a good flight,
lieutenant-general
Thomas Keck

USAF officials, including Lt.-Gen. Thomas Keck (fifth from right, front row) at Dyagilevo AB, Ryazan'. Lt.-Gen. Mikhail Oparin is fifth from left.

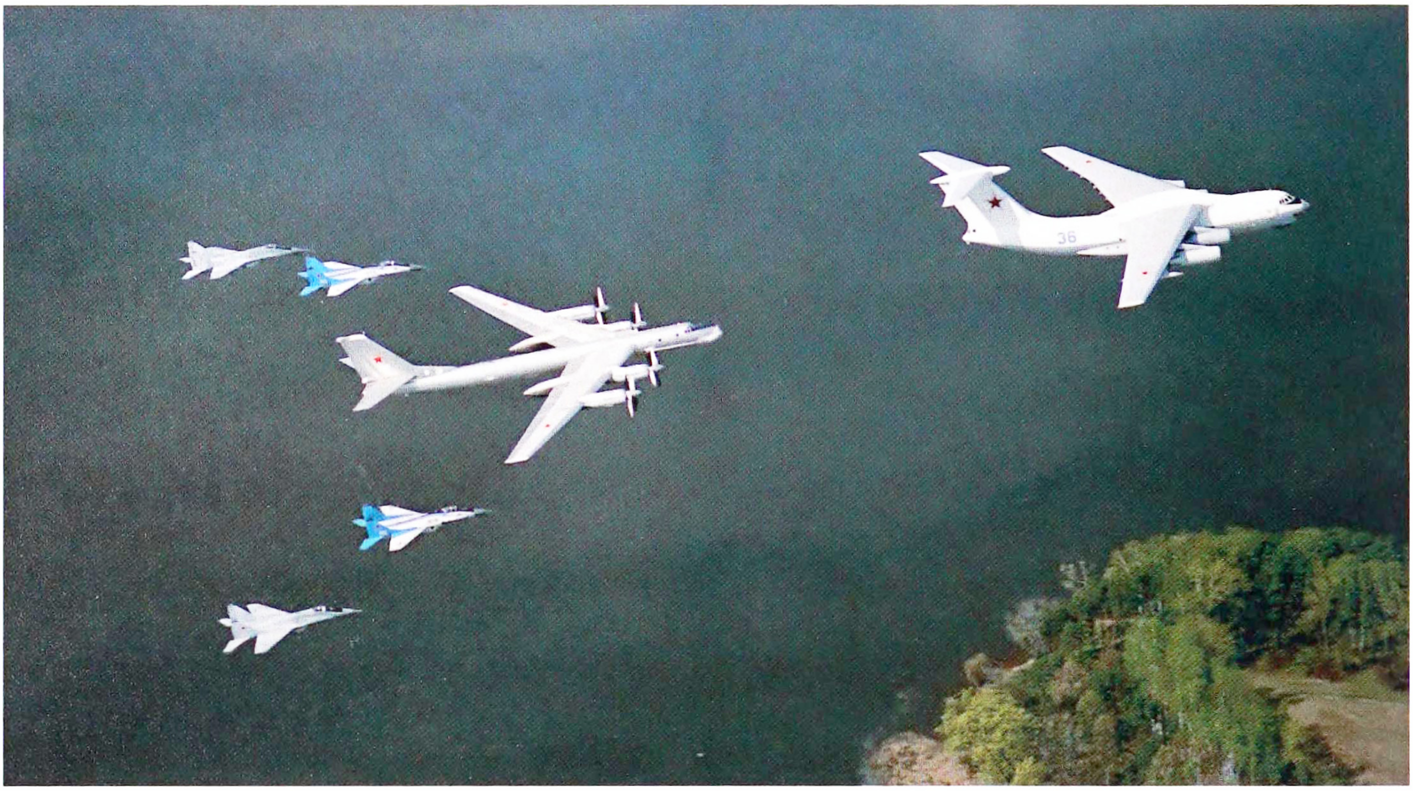
The Tu-22M3 with Lt.-Gen. Keck on board.

display specially staged for the benefit of the visiting President on opening day.

A few days before the opening of the MAKS-2007, on 11th August, a major air event celebrating the 95th anniversary of the Russian Air Force took place in Monino south of Moscow where the well-known museum is located. The grass airfield adjacent to the museum and to the Air Force Academy compound was turned into a spectator area, and the public was allowed access to the Academy's instructional flight line. The centrepiece of the event was a grand air parade involving most of the types currently in Russian Air Force service – including the DA types. First, a 184th TBAP Tu-95MS coded '28 Red' passed over the field, escorted by two MiG-29 *Fulcrum-C* fighters of the Air Force's 4th Combat Training & Aircrew Conversion Centre in Lipetsk. Next came a pair of Tu-22M3s ('16 Red' and '60 Red') in echelon starboard formation with wings at minimum sweep. They were followed by the abovementioned Tu-160 '11 Red' *Vasiliy Sen'ko*, again with fighter escort from the Lipetsk Centre – this time a Su-27SM *Flanker-B* single-seater and a Su-27UB *Flanker-C* trainer. Then, after a brief pause, came IL-78M '35 Blue' leading another Tu-95MS ('28 Red') in line astern formation in a simulated in-flight refuelling. Interestingly, a different *Blackjack* ('02 Red' *Vasiliy Reshetnikov*) had been involved in the dress rehearsal which took place on 7th August and the escort had consisted of two Su-27SM fighters from Lipetsk.

On 9th May 2008 two strategic bombers from Engels – Tu-160 '02 Red' and a Tu-95MS – participated in the V-Day parade, as did three Tu-22M3s of the 840th TBAP from Sol'tsy-2 AB and IL-78M tankers of the 203rd GvAPSZ from Dyagilevo AB. This time the parade took place at the usual location – in Red Square. Accordingly the participating aircraft approached the city from the north, flying along Leningradskiy Prospekt (Leningrad Avenue) and Tverskaya Street. The aviation part of parade was opened by three Mil'

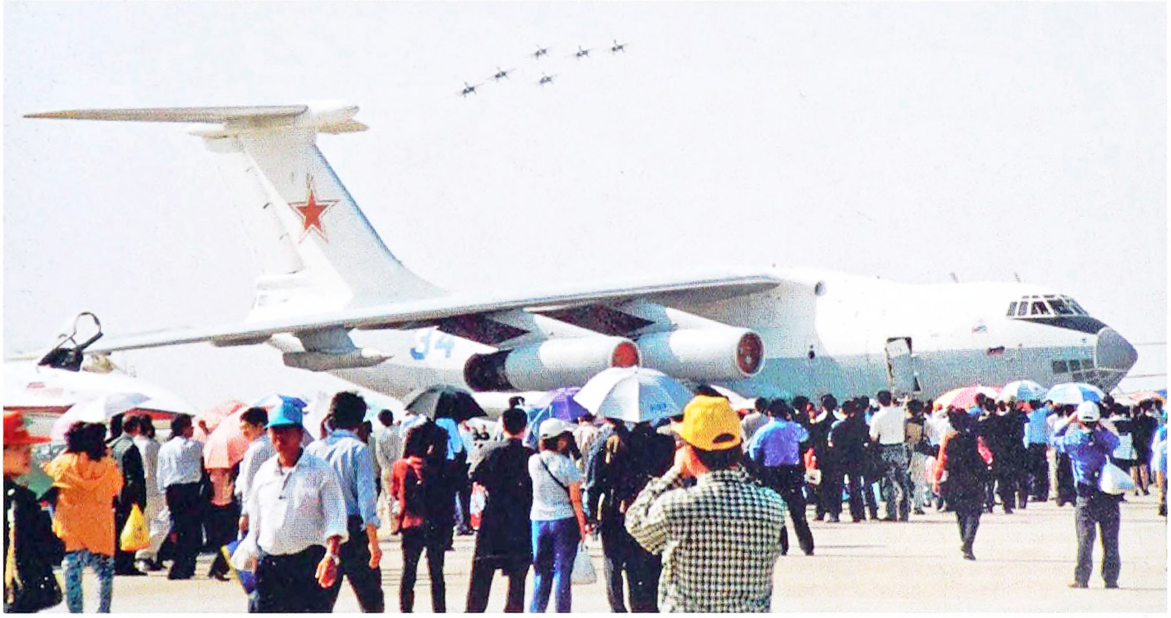
Thomas Keck was given a ride in a Tu-22M3 and a shot of vodka afterwards.



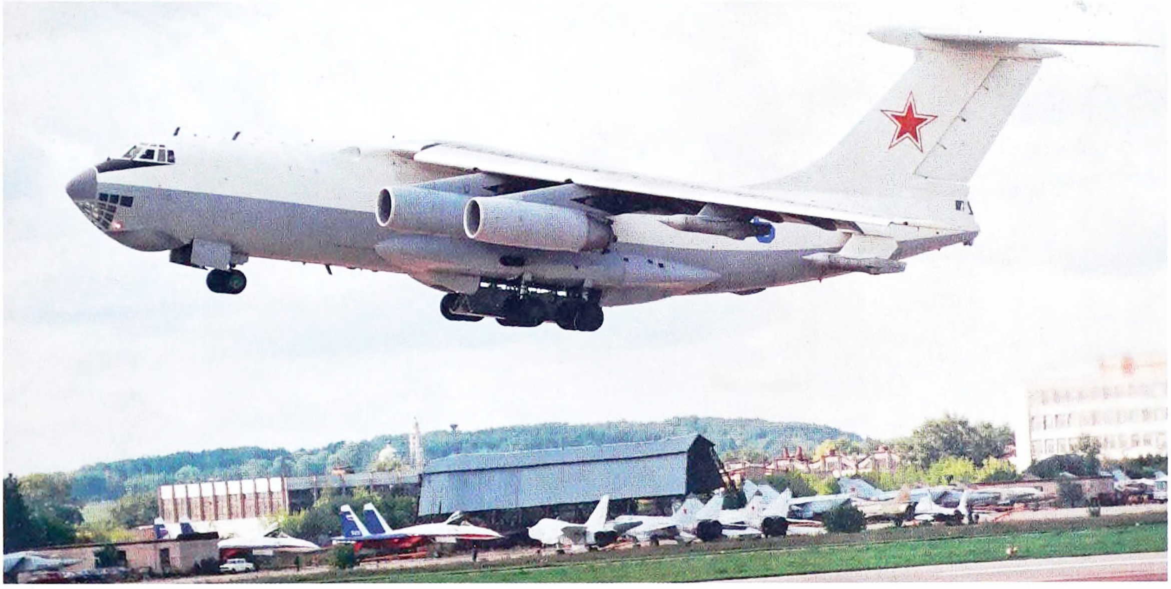
IL-78M '36 Blue' with a Tu-95MS and four MiG-29s during a rehearsal for the 1995 V-Day parade.

'36 Blue' participated in other air events as well, such as the MAKS-2005 airshow.

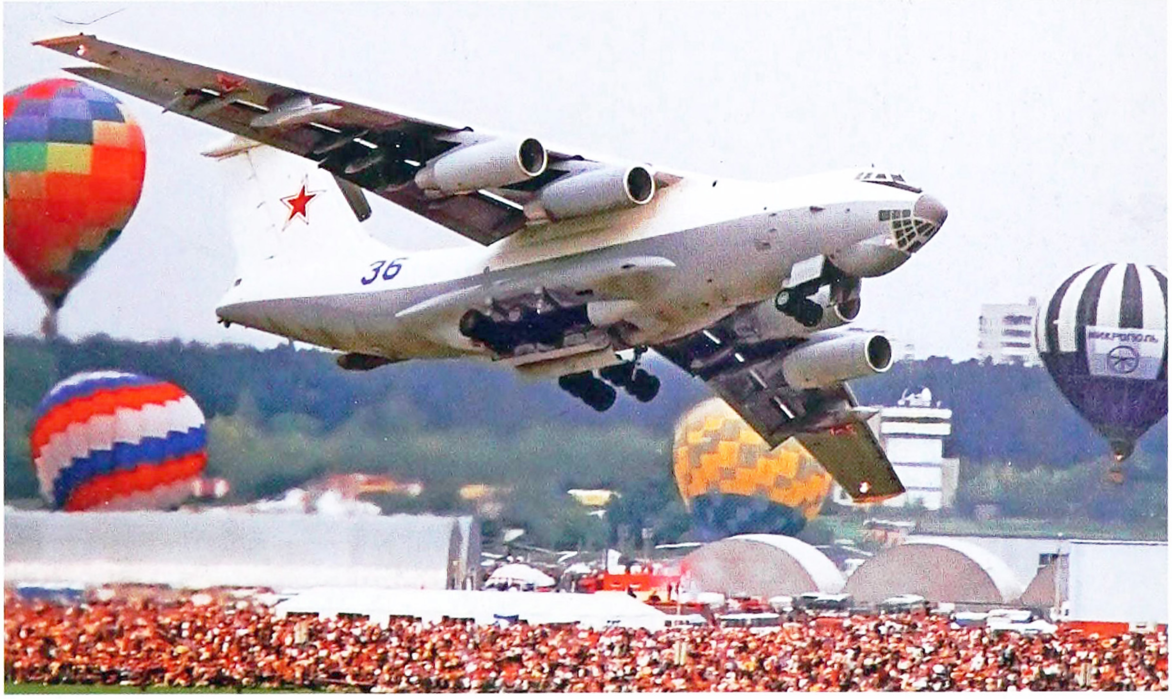
Mi-8MT helicopters of the Federal Security Service (FSB) aviation component carrying huge flags of the Russian Federation, the Russian Armed Forces and the Air Force. Once the slow choppers had moved out of the way, an An-124 Ruslan heavy-lift transport escorted by two Su-27 fighters flew over Red Square. Then came a Tu-160 accompanied by two MiG-31B heavy interceptors, next an IL-78M and a Tu-95MS in a simulated refuelling formation escorted by two MiG-29s of the 4th TsBP i PLS from Lipetsk. They were followed by three Tu-22M3 long-range bombers in V formation, and these in turn by a quartet of Su-25 attack aircraft from Buturlinovka AB which had temporarily redeployed to Kubinka AB. A unique diamond-nine mixed formation of aircraft from two Russian Air Force aerobatic teams based at Kubinka – five Su-27s of the Roosskiye Vityazi (Russian Knights) and four MiG-29s of the Strizhi (Swifts) – concluded the air parade in style.



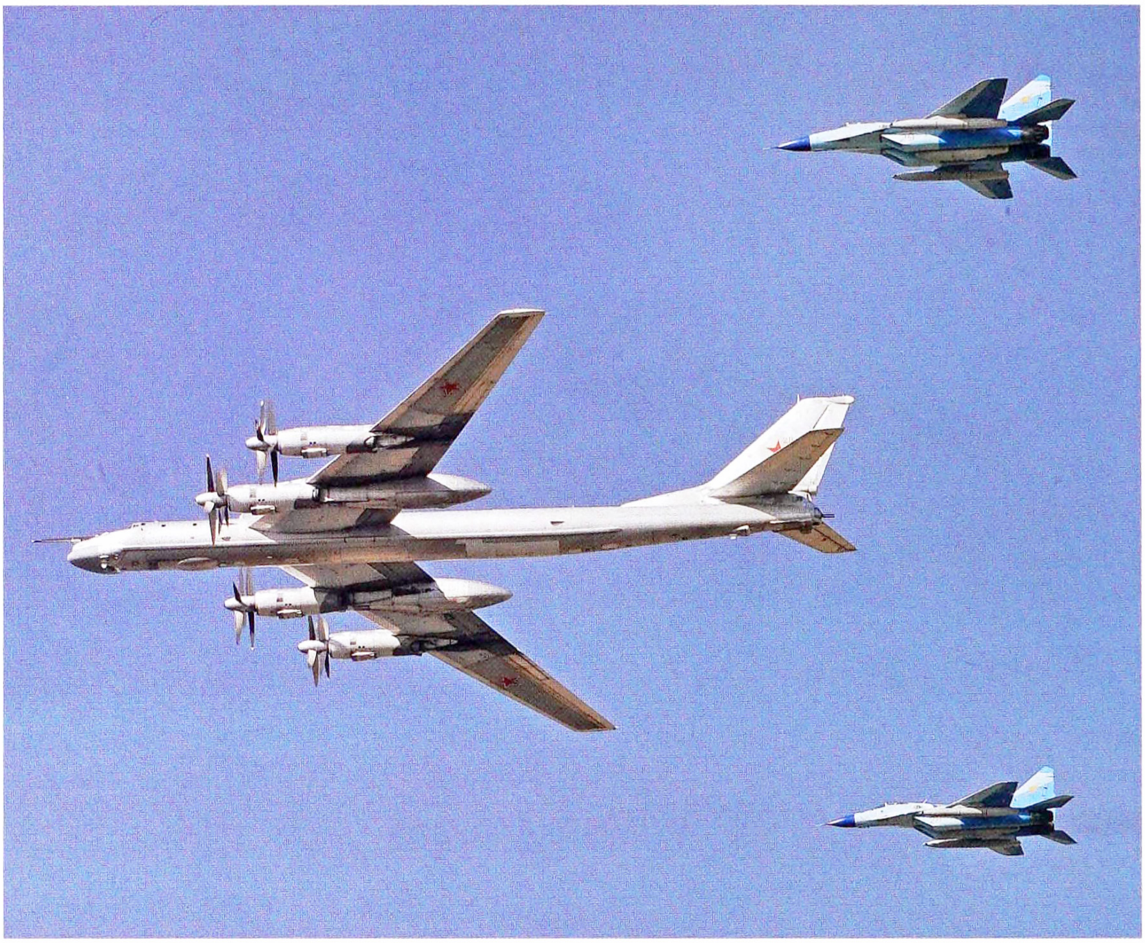
IL-78 *sans suffixe* '34 Blue' acted as a support aircraft for the Su-27PD (visible on the left) during Airshow China 2000 at Zhuhai.



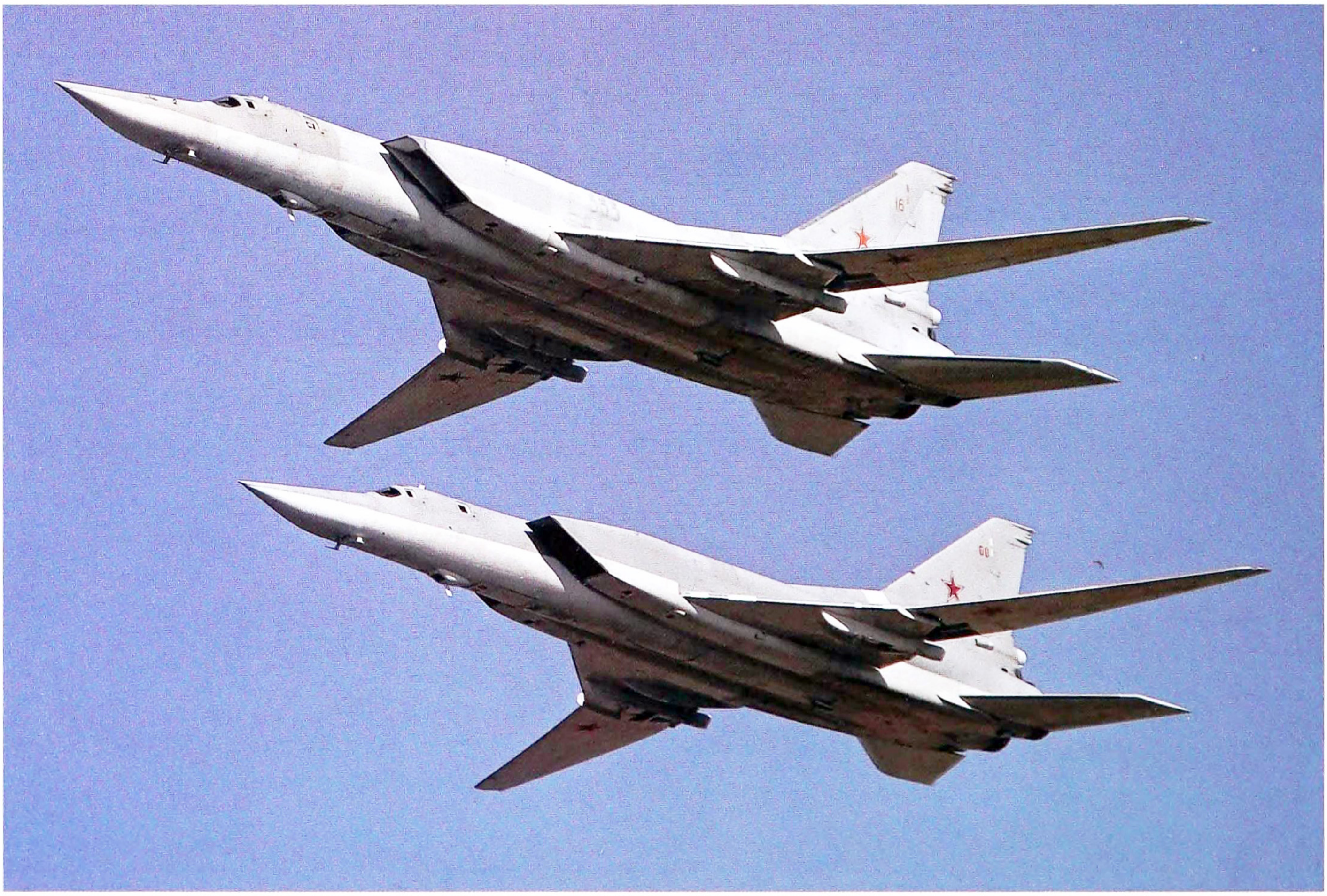
IL-78M '36 Blue' commences its demonstration flight at the MAKS-2005, taking off at Zhukovskiy.



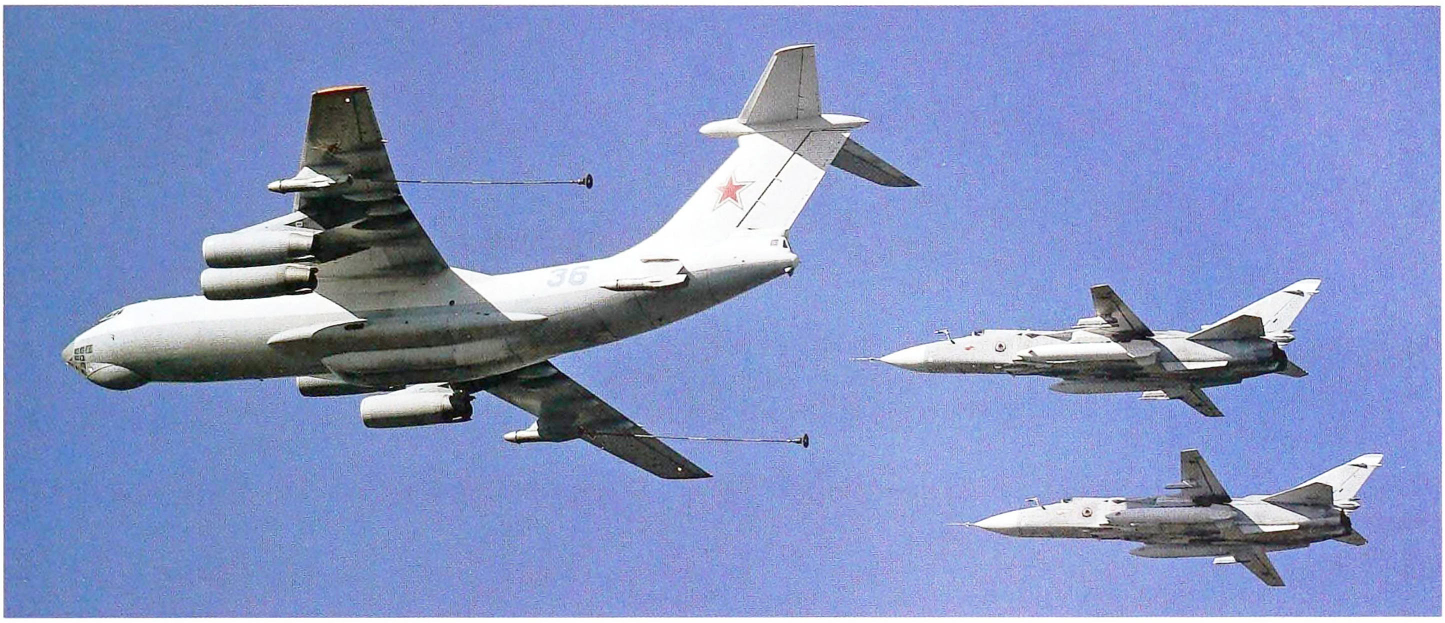
The take-off looked even more spectacular from the control tower, with hot air balloons and the crowd of spectators in as a backdrop.

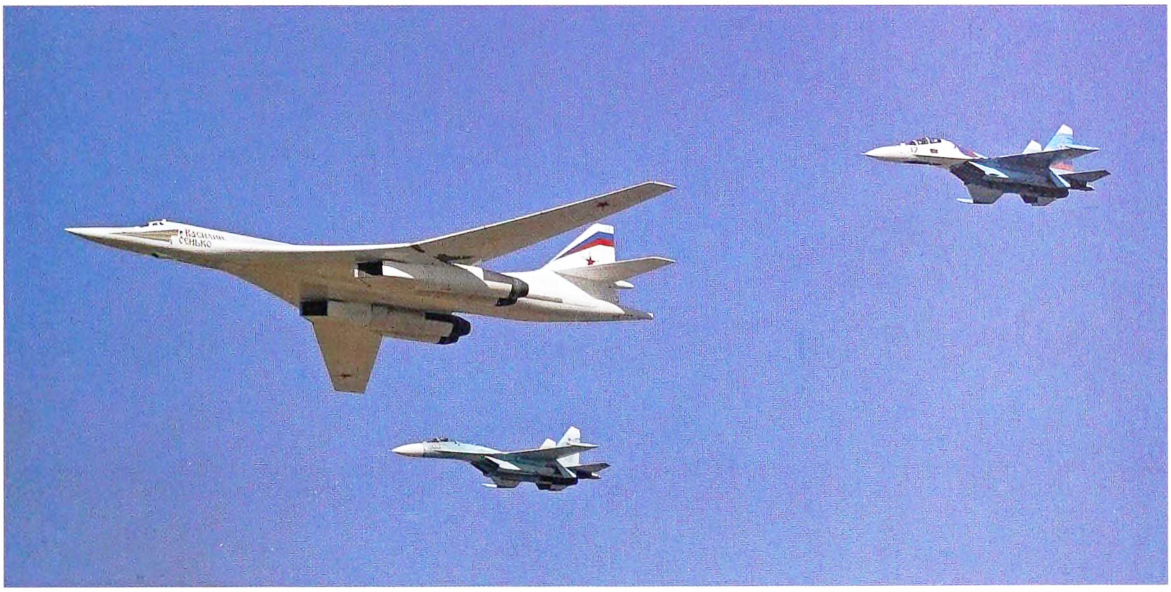


184th TBAP Tu-95MS '28 Red' escorted by 4th TsBP i PLS MiG-29s passes over Monino on 11th August 2005 during the Russian Air Force's 95th anniversary air parade.



Tu-22M3s '16 Red' and '60 Red' passing over Monino on the same occasion.

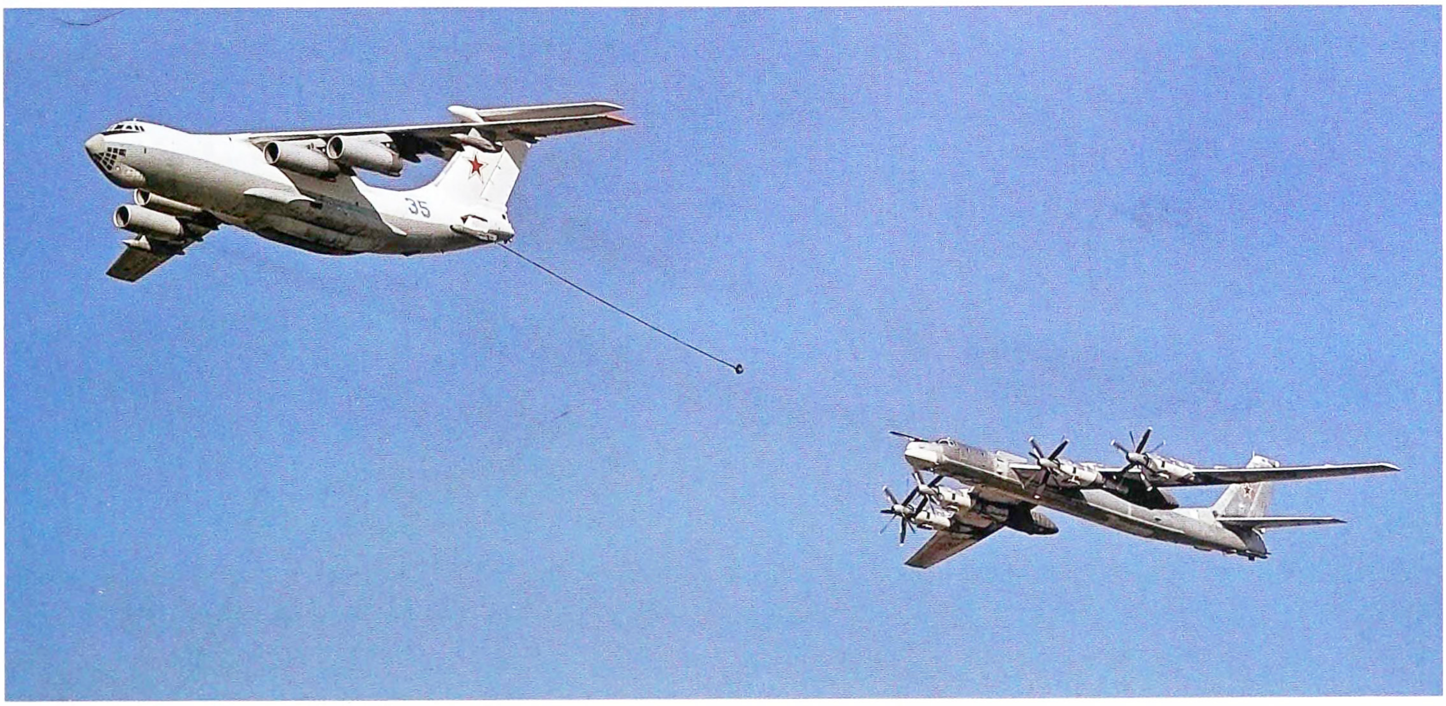


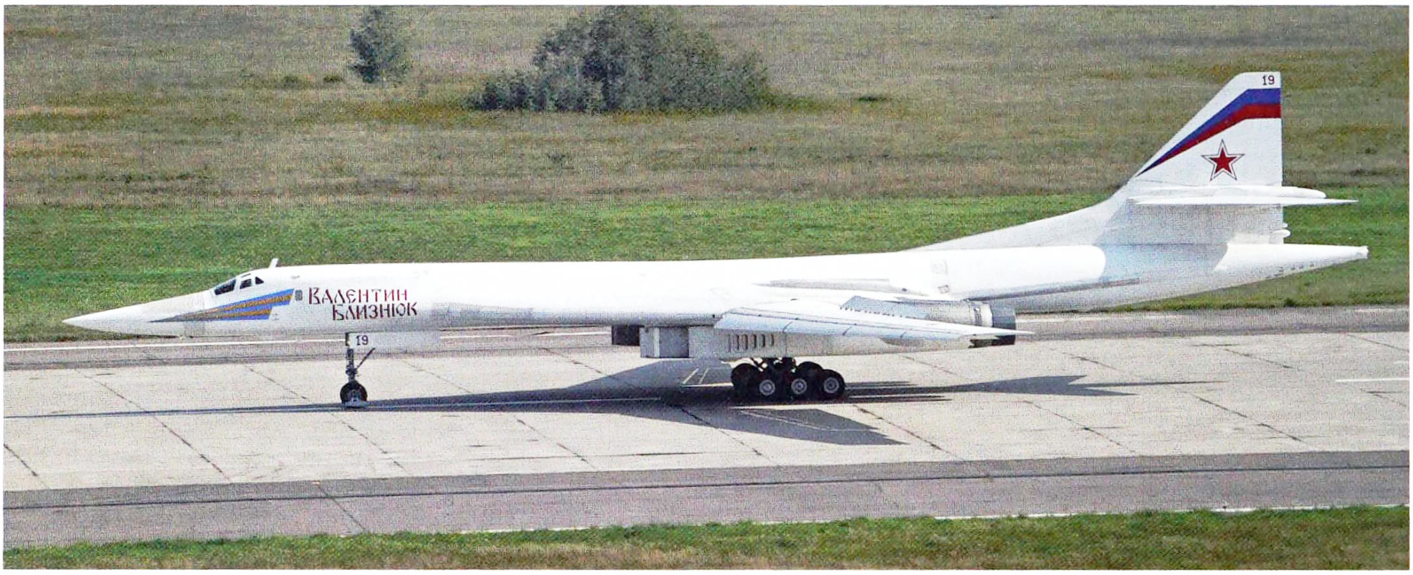


The flypast also included IL-78M '35 Blue' leading a pair of Su-24Ms from Lipetsk.

Another participant – Tu-160 '11 Red' *Vasiliy Sen'ko* escorted by Su-27s from Lipetsk.

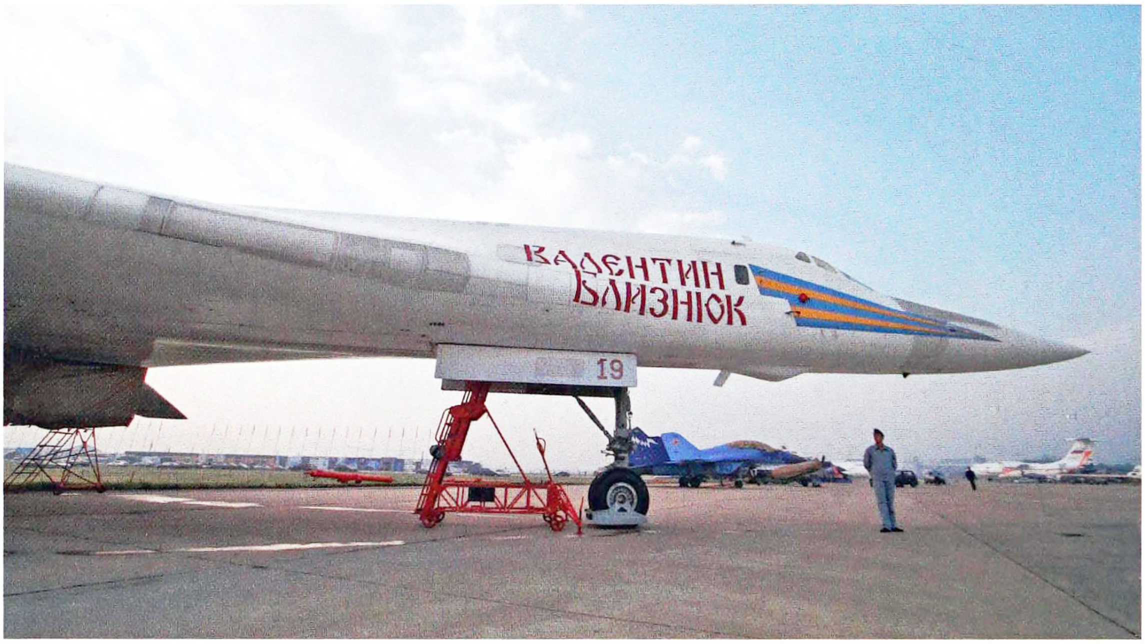
IL-78M '35 Blue' and 184th TBAP Tu-95MS '27 Red' over Monino.



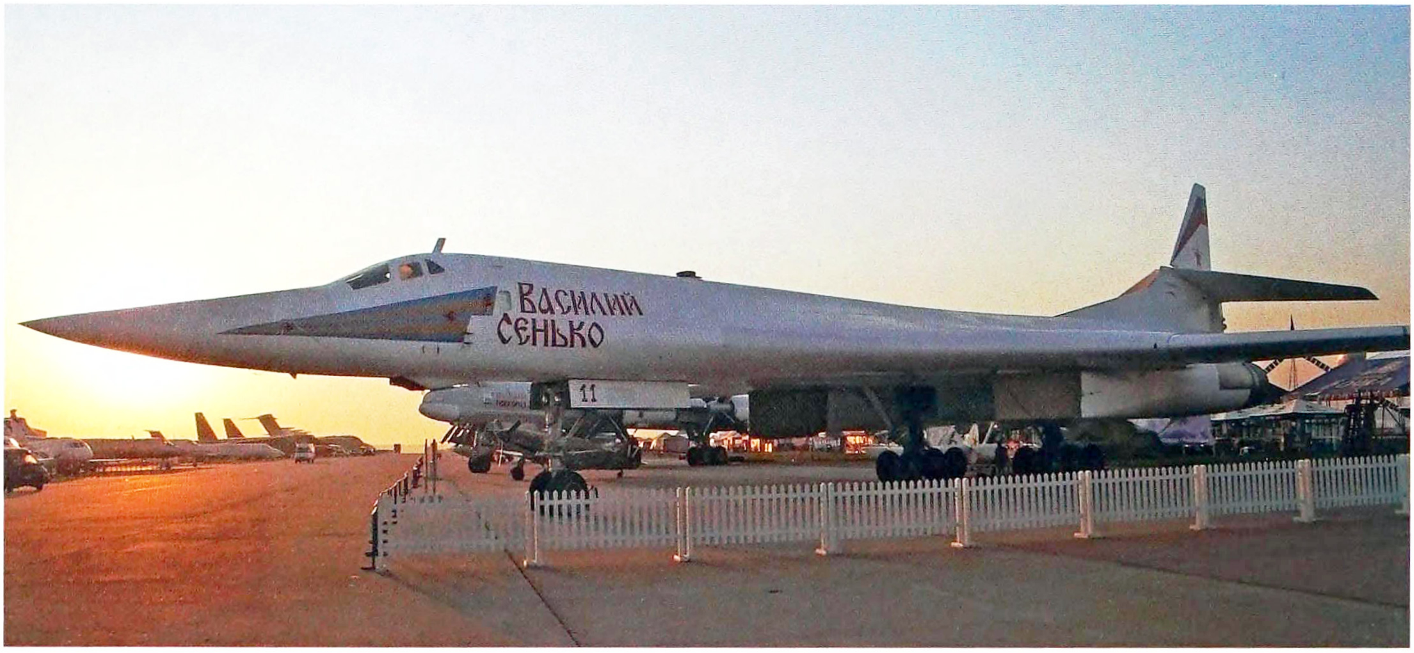

19
ВАЛЕНТИН БЛИЗНЮК

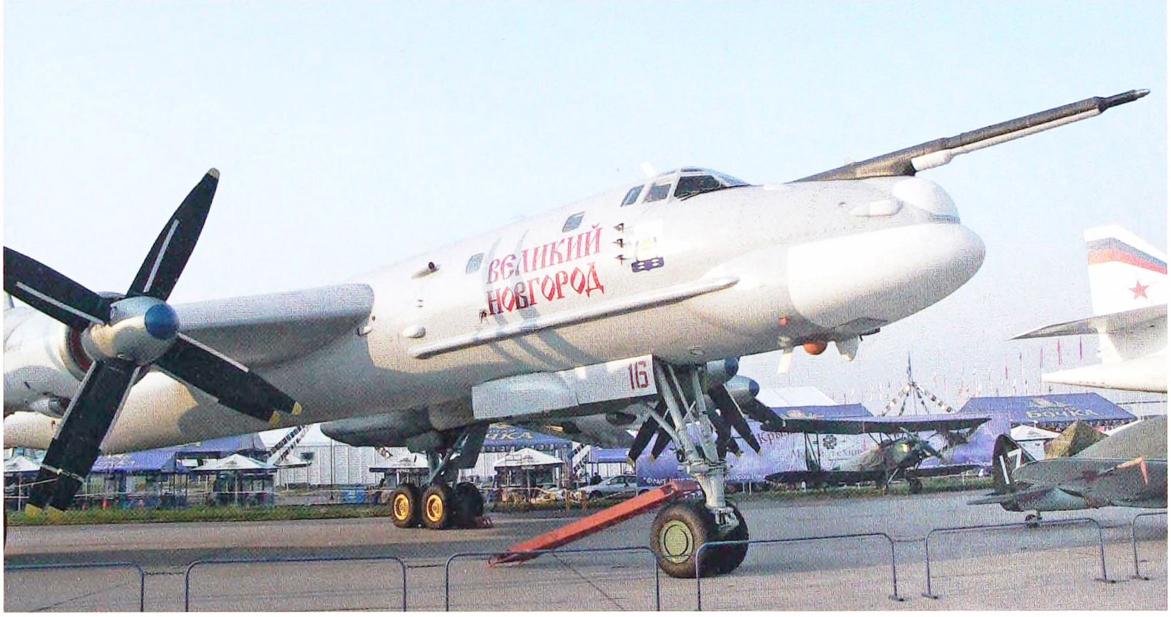
Tu-160 '19 Red' *Valentin Bliznyuk* arrives at Zhukovskiy for the MAKS-2007.

The same aircraft in the 'Presidential' display area at the show.

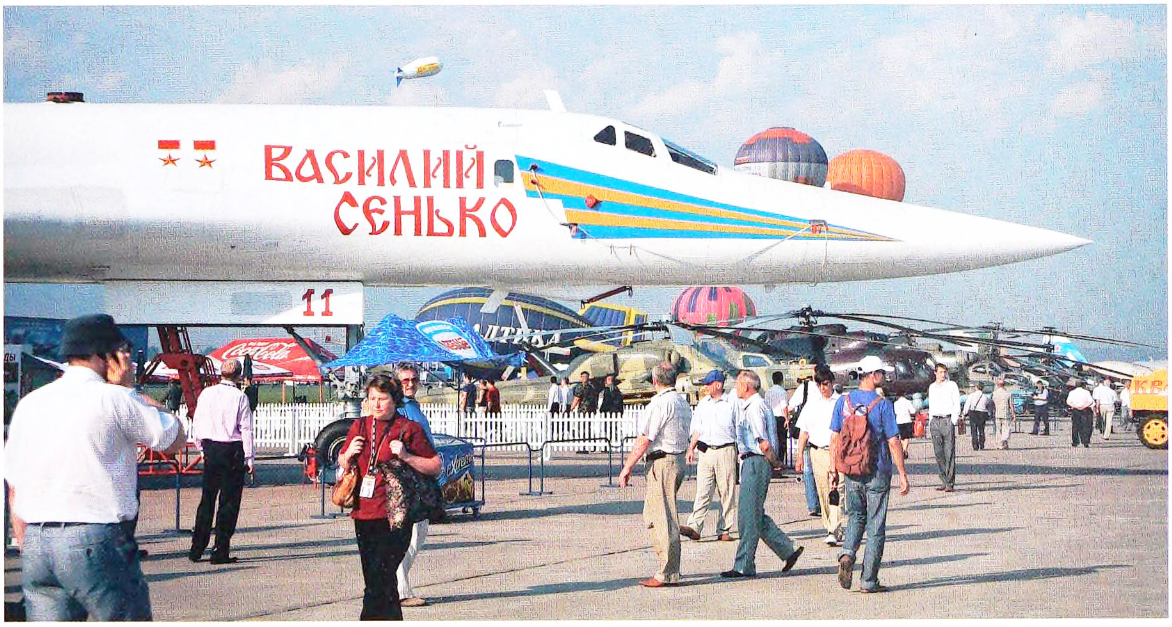

ВАЛЕНТИН БЛИЗНЮК
19

A different *Blackjack*, '11 Red' *Vasiliy Sen'ko*, was in the general static park at the MAKS-2007.


ВАСИЛИЙ СЕНЬКО
11

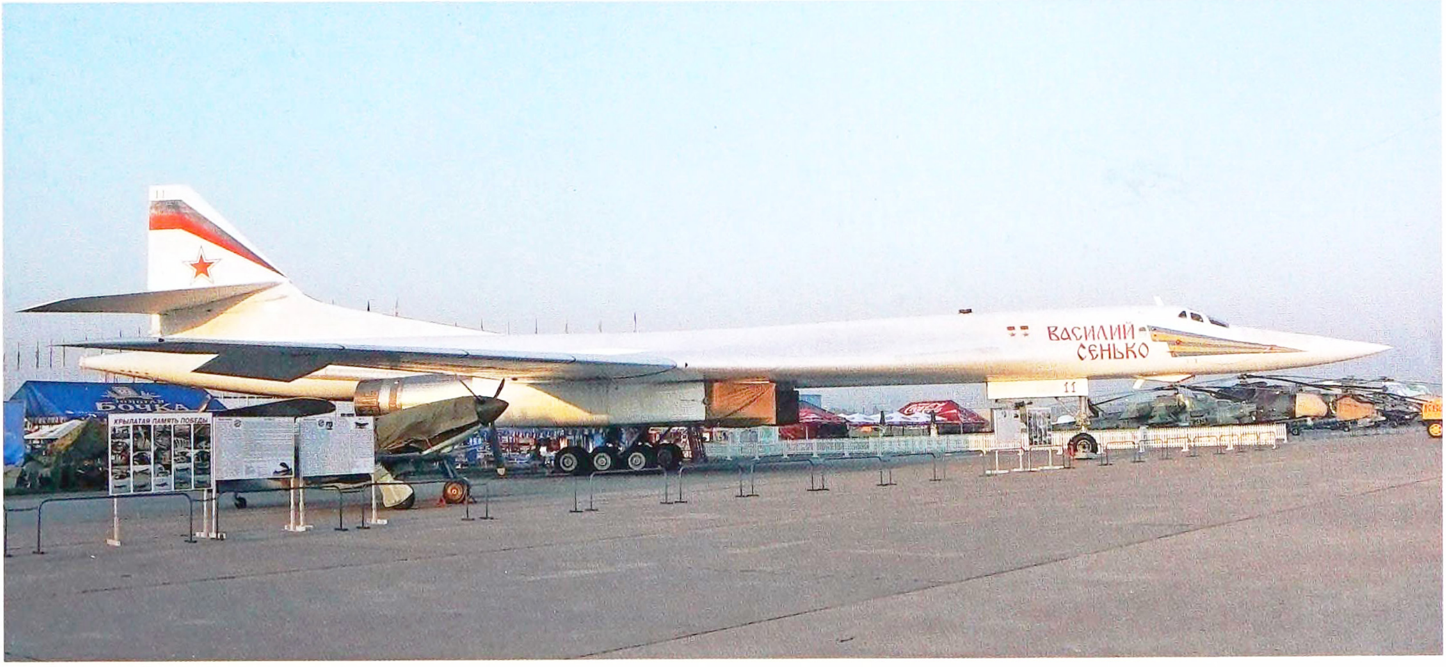

ВЕЛИКИЙ НОВГОРОД
16

The DA was also represented at the MAKS-2007 by Tu-95MS '16 Red' *Velikiy Novgorod*.

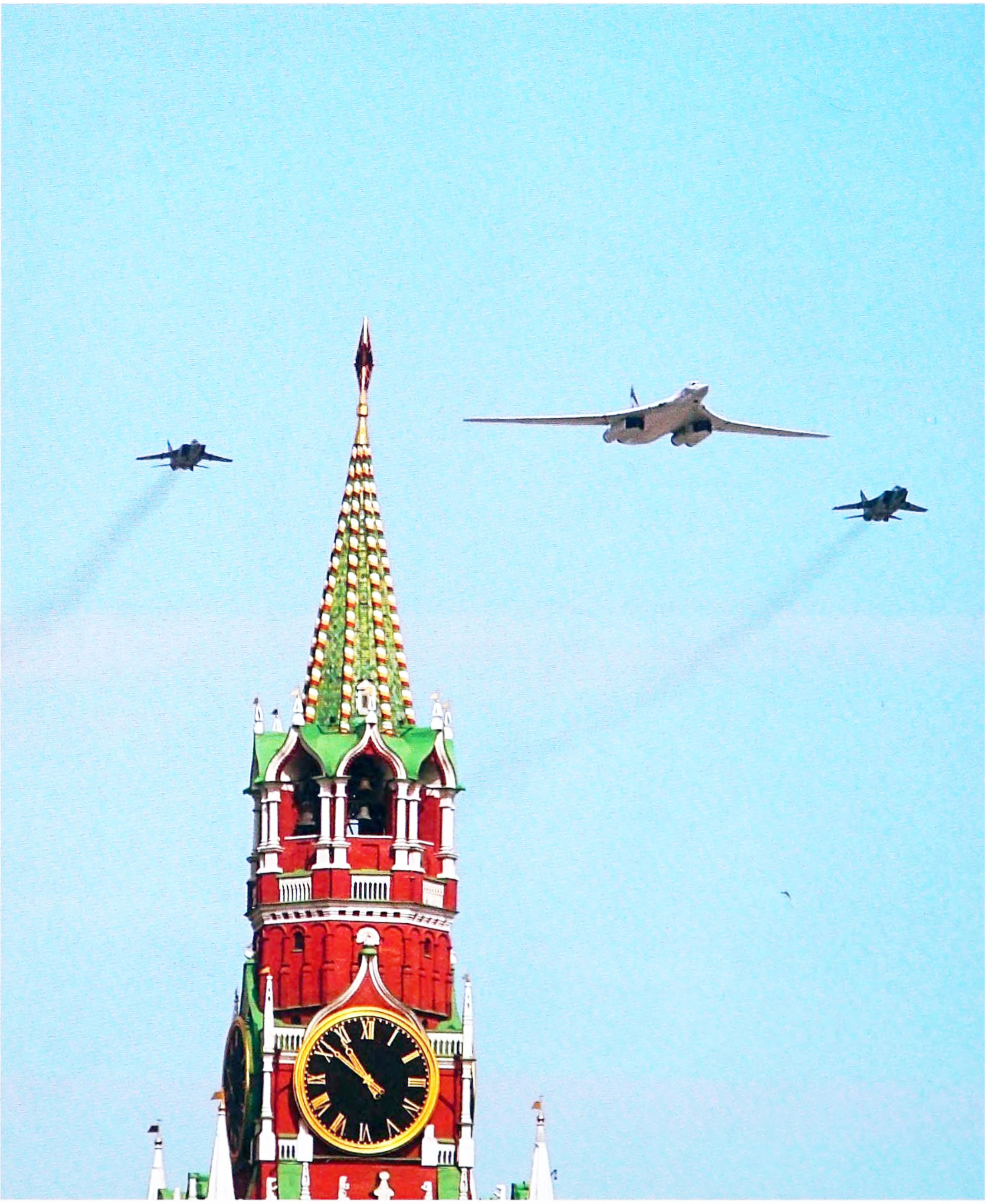

ВАСИЛИЙ СЕНЬКО
11

If aircraft had feelings, the Tu-160 would feel ill at ease amidst the multi-coloured balloons and souvenir stalls.

The Tu-160 shared the display line at the MAKS-2007 with a carefully restored MiG-3 fighter of Great Patriotic War vintage.


ВАСИЛИЙ СЕНЬКО

A trio of Tu-22M3s ('25 Red' leading '26 Red' and '24 Red') participated in the 2008 V-Day parade over Red Square in Moscow.



A Tu-160 escorted by two MiG-31Bs flies past the Spasskaya (The Saviour's) Tower of the Moscow Kremlin on 9th May 2008.

More participants of the 2008 V-Day parade – IL-78M '35 Blue', Tu-95MS '16 Red' *Velikiy Novgorod* and two MiG-29s from Lipetsk.

After the first rehearsals, the Air Force command decided to reduce the horizontal separation between the groups of aircraft in the parade formation. *'We are not entirely happy with the time intervals and distance between the aircraft. It would be desirable to make it a bit more compact, therefore I have agreed to the idea to reduce the horizontal separation between aircraft groups to 3-4 km [1.86-2.5 miles]'* – the Russian Air Force

The same bomber and fighter escort seen from a different angle.

Великий Новгород
16
28
32

Another view of the Tu-160 and MiG-31Bs at the 2008 air parade.

Tu-95MS '16 Red' flies over Moscow en route to Red Square.

Commander-in-Chief Col.-Gen. Aleksandr Zelin told journalists at a press conference. He said this was meant to make the aviation component of the parade more spectacular and dynamic, as the spectators should not wait too long for the next group and get bored.

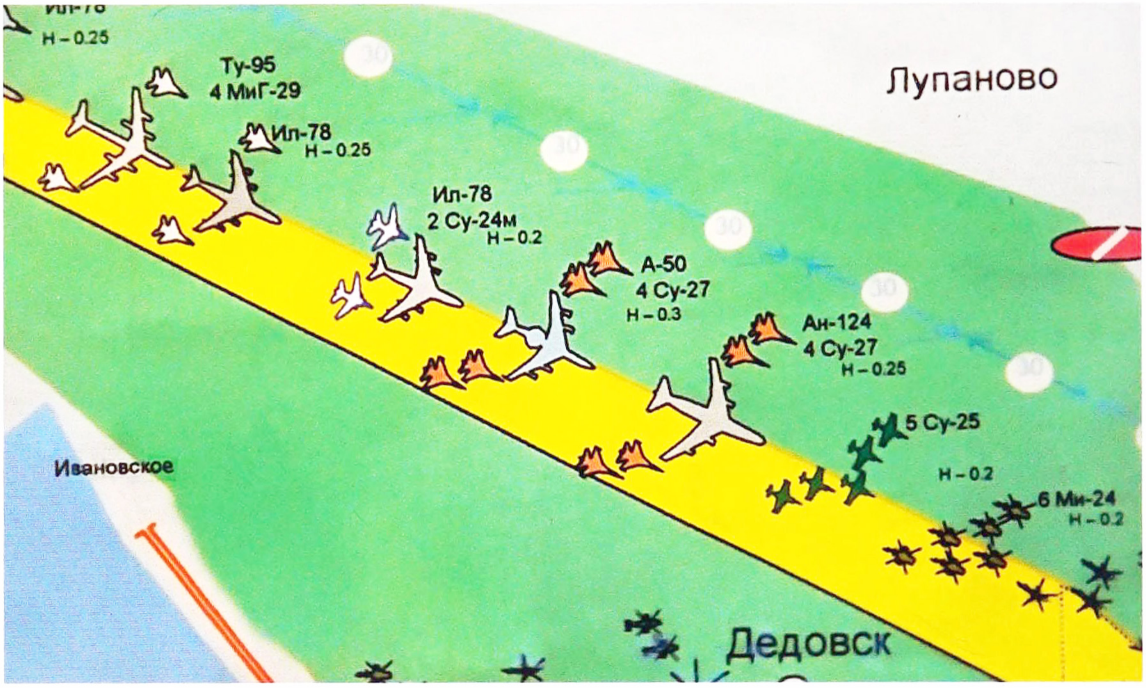
Exactly a year later DA aircraft once again participated in the aviation part of the V-Day parade in Red Square. Full-scale training sessions and rehearsals began a month before the event. The first of them took place on 7th April. By then the aircraft of several Russian Air Force units detailed for the parade had gathered at Shaikovka AB. This airfield has been chosen as the temporary operating base for the parade for two reasons. Firstly, the runway

at Shaikovka was long and strong enough for heavy aircraft; secondly, the base was conveniently located not too far from Moscow and yet not too close, which allowed the crews adequate time after launch to assume the required formation prior to crossing the city limits of the capital. However, not all of the participating aircraft took off from Shaikovka; some of the fixed-wing aircraft launched from their home bases which were located close to the group's intended route, while the helicopters redeployed from the Army Aviation's 344th TsBP i PLS in Torzhok to Kubinka AB.

On 7th April, 16 assorted aircraft departed from Shaikovka. The first to go was a giant An-124 transport (RA-82028) of the 224th Flight Unit, a commercial division of the Russian Air Force's military airlift branch (61st (Strategic) Air Army of the Supreme High Command). It was followed by the missile carriers of the 37th (Strategic) Air Army of the Supreme High Command. Three IL-78M tankers ('51 Blue', '36 Blue' and '31 Blue') of the 203rd GvAPSZ from Dyagilevo AB were slotted in between the Tu-160 and the Tu-95MS. The 'exit' of the DA aircraft was concluded by three Tu-22M3s gleaming with fresh paint. Next came the representatives of the Tactical Aviation's 4th TsBP i PLS; a pair of *Flankers* – a Su-27 and a Su-27UB – departed first, followed by visitors from the Centre's Savasleika branch – a pair of MiG-31BM interceptors. Pairs of MiG-29s and Su-24M tactical bombers from Lipetsk were the last to leave. After making the rendezvous en route with the helicopter group which had taken off from Kubinka, the parade formation of Russian Air Force aircraft made a low-altitude pass over

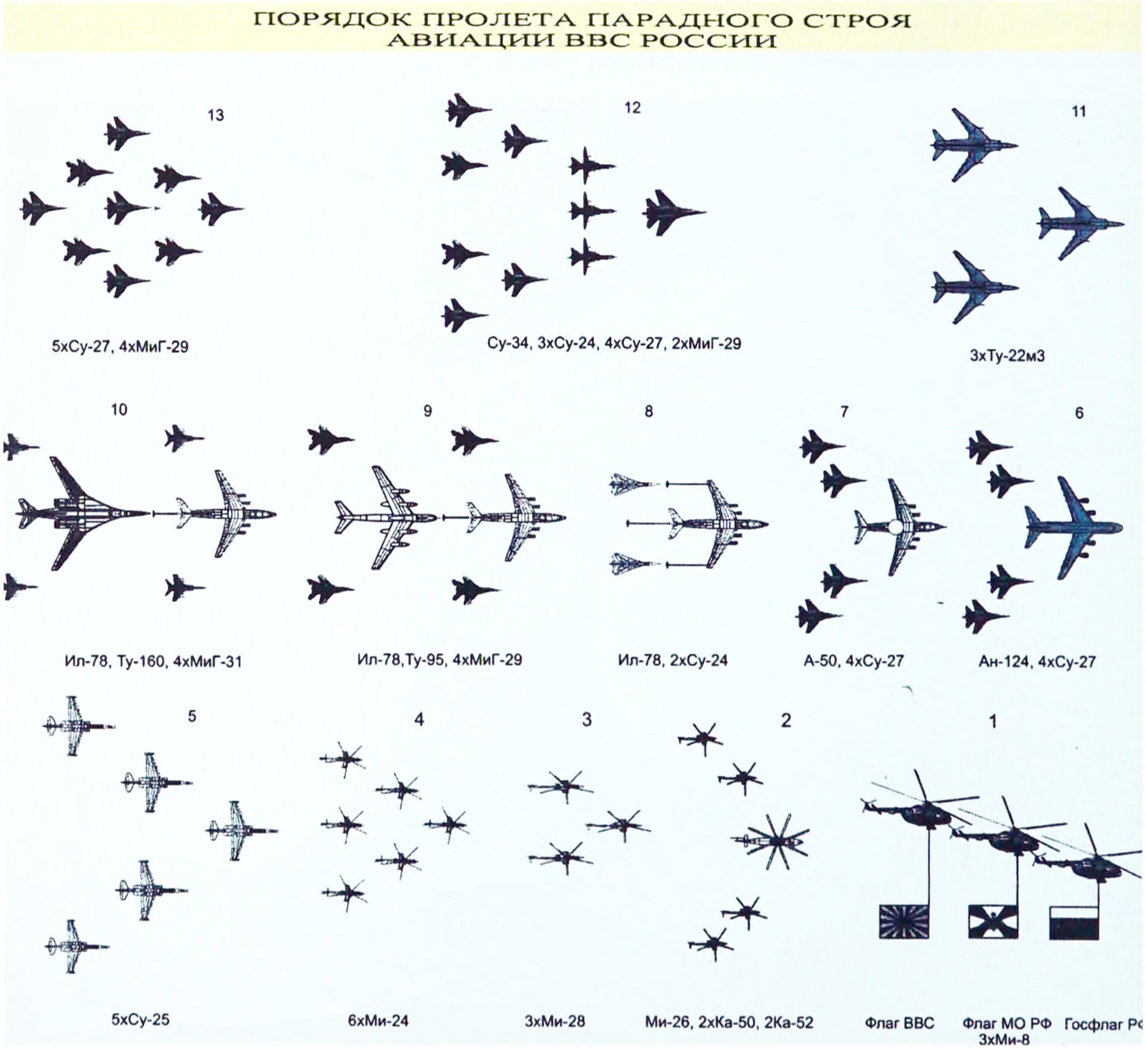
IL-78M '50 Blue', Su-24M '34 White' and Su-34 '02 Red' at the 2008 V-Day parade.

Tu-160 '10 Red' *Nikolay Kuznetsov* and its escort over the suburbs of Moscow in May 2009.


Н-0.25
Ту-95
4 МиГ-29
Ил-78
Н-0.25
Лупаново
Ил-78
2 Су-24м
Н-0.2
А-50
4 Су-27
Н-0.3
Ан-124
4 Су-27
Н-0.25
5 Су-25
Н-0.2
6 Ми-24
Н-0.2
Ивановское
Дедовск

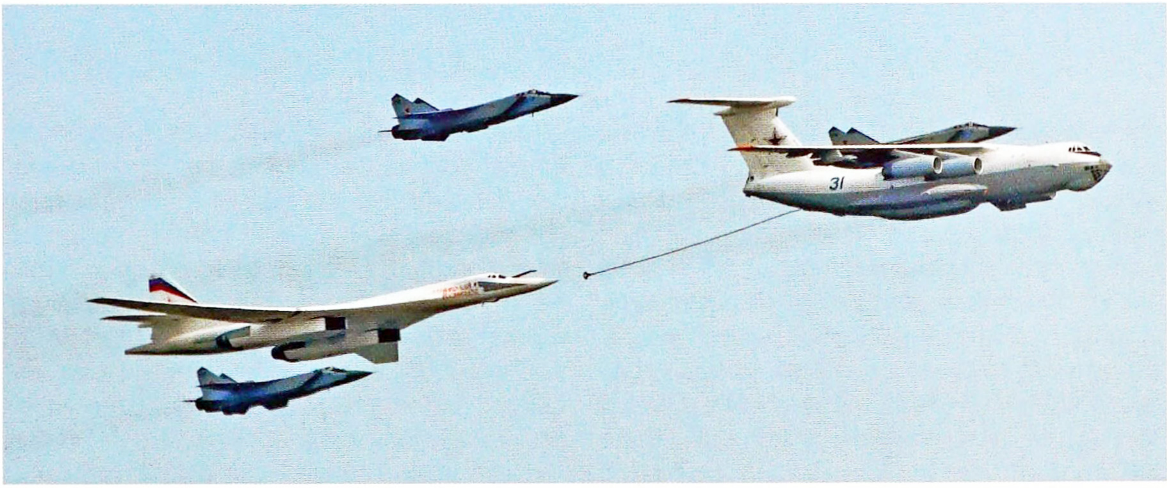
Part of the actual Air Force map showing the air parade formation's avenue of approach to Moscow on 9th May 2009.

the designated reference point – the settlement of Alabino (Moscow Region) which posed as the Red Square for the occasion. All of this was observed and photographed by dozens of journalists invited to report on the rehearsal of the parade, and also by the countless plane spotters, who had taken up convenient positions both near the formation's way-

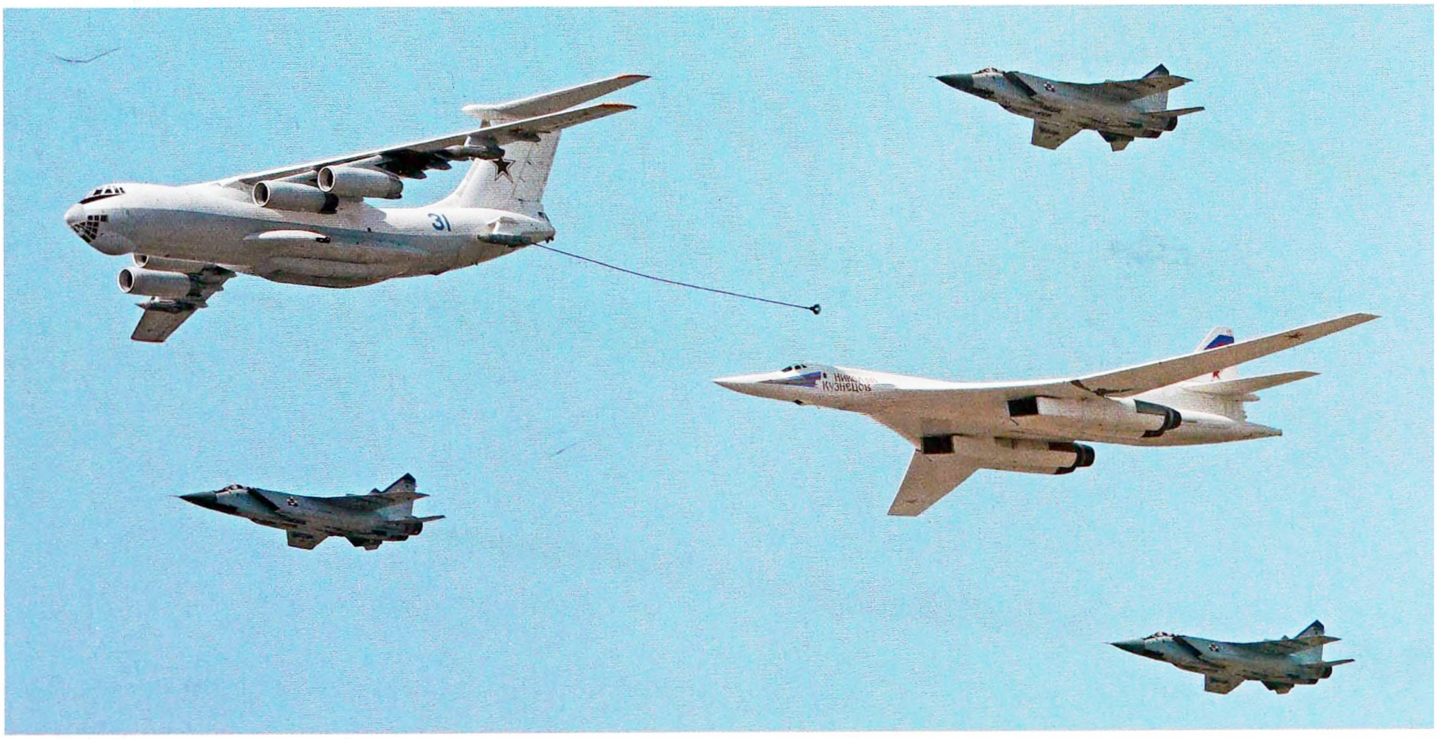

ПОРЯДОК ПРОЛЕТА ПАРАДНОГО СТРОЯ
АВИАЦИИ ВВС РОССИИ
13
5хСу-27, 4хМиГ-29
12
Су-34, 3хСу-24, 4хСу-27, 2хМиГ-29
11
3хТу-22м3
10
Ил-78, Ту-160, 4хМиГ-31
9
Ил-78,Ту-95, 4хМиГ-29
8
Ил-78, 2хСу-24
7
А-50, 4хСу-27
6
Ан-124, 4хСу-27
5
5хСу-25
4
6хМи-24
3
3хМи-28
2
Ми-26, 2хКа-50, 2Ка-52
1
Флаг ВВС
Флаг МО РФ
3хМи-8
Госфлаг Р

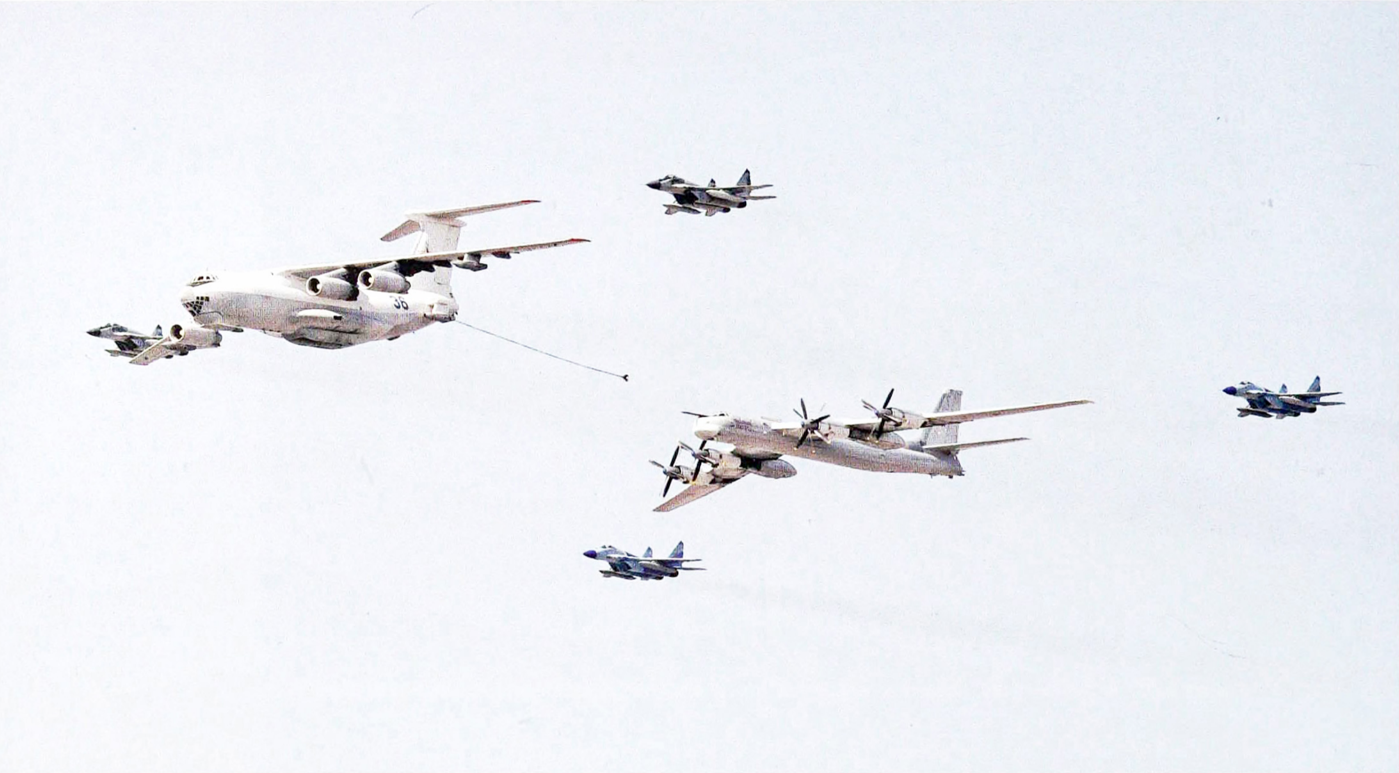
The official sequence of air groups at the 2009 V-Day parade: Mi-8MTs with the Russian national flag, MoD flag and Air Force flag; a Mi-26 leading pairs of Ka-50 and Ka-52 attack helicopters; three Mi-28N attack helicopters; six Mi-24P attack helicopters of the Berkuty display team; five Su-25s; an An-124 and an A-50 AWACS with Su-27 escort; an IL-78M with two Su-24Ms; IL-78M/Tu-95MS combo with MiG-29 escort; IL-78M/Tu-160 combo with MiG-31B escort; three Tu-22M3s; a Su-34 leading three Su-24Ms, two MiG-29s and four Su-27s; and the Strizhi/Roosskiye Vityazi mixed formation.

At the 2009 V-Day parade the Tu-160 and IL-78M were escorted by four MiG-31BMs.



IL-78M '31 Blue' and Tu-160 '10 Red' escorted by MiG-31B '87 Blue' and MiG-31BMs '91 Blue', '92 Blue' and '94 Blue' over Red Square on 9th May 2009.



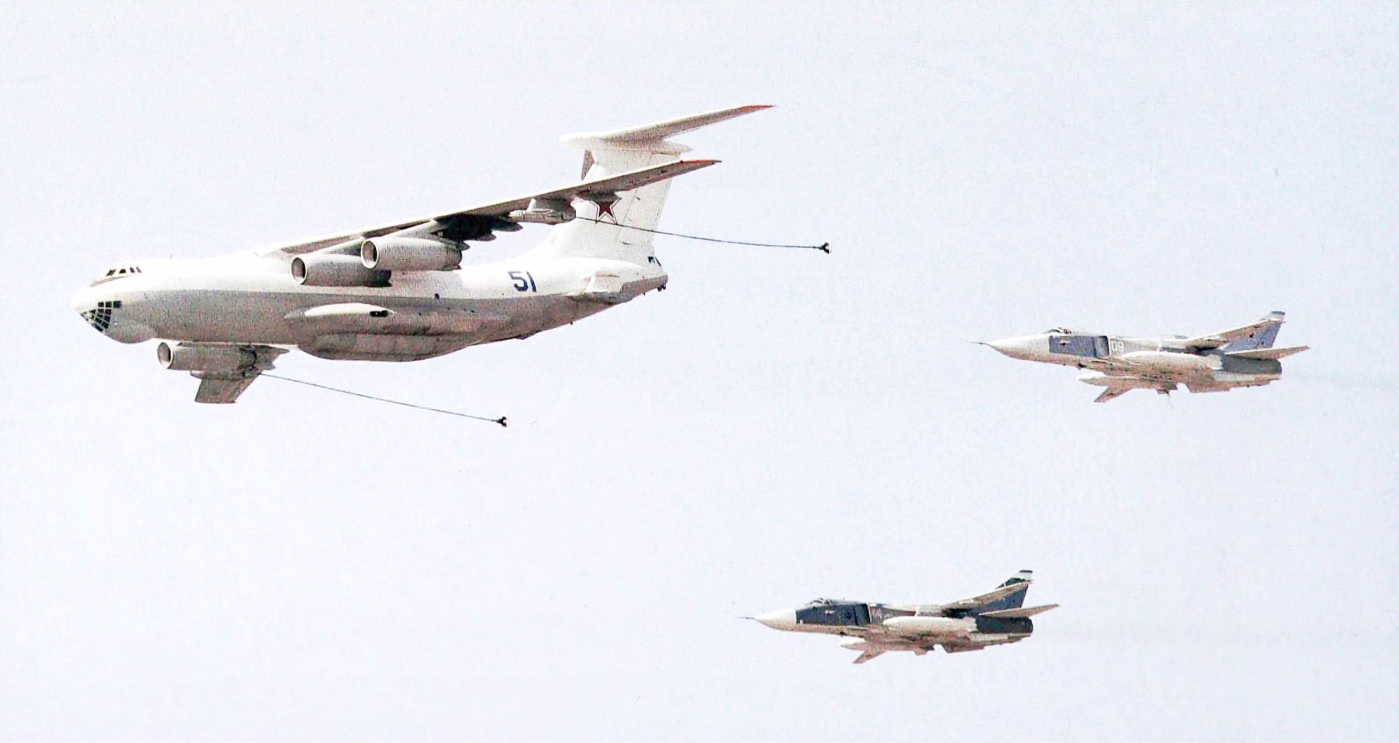


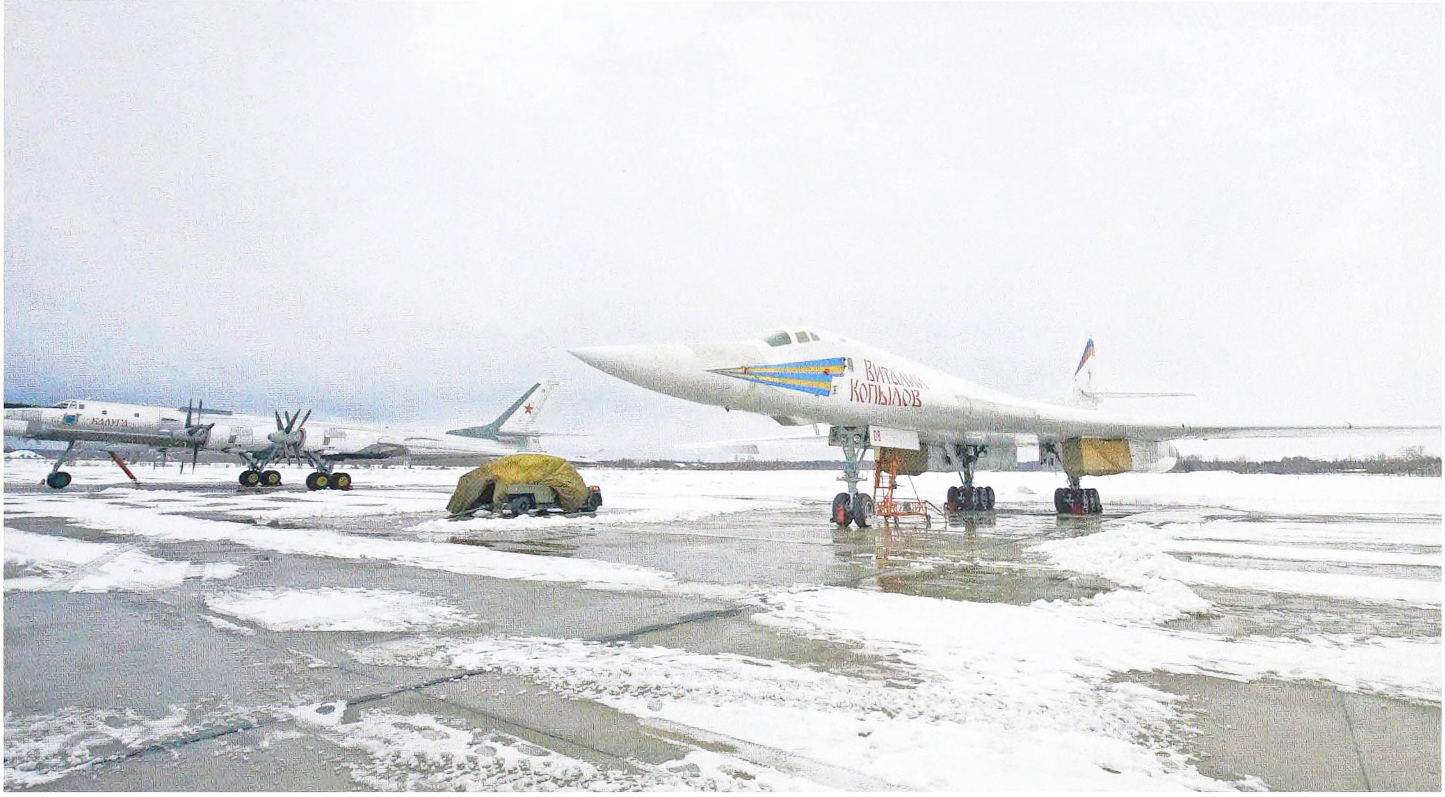
IL-78M '36 Blue' and Tu-95MS '16 Red' plus four MiG-29s at the 2008 parade.

IL-78M '51 Blue' plus Su-24Ms '09 White' and '44 Red' at the 2009 V-Day parade.

points and outside (and, in the case of a few lucky ones, inside) the base perimeters of the airfields of origin – Shaikovka, Kubinka and Lipetsk-2 AB.

Just over an hour after successfully completing the rehearsal, the aeroplanes started coming in to land at Shaikovka one by one. Of course, the 'heavies' made way for the 'small fry'. The IL-78M crews made a good deal of showing off – the tankers made half of the landing run in a nose-up attitude, keeping the nosewheels off the ground and making contact only with the rear pair of main gear units. The trick had been learned from fighter pilots, who often do this sort of thing on landing, but when performed by a four-turbofan machine weighing upwards of 100 tons (220,450 lb) the 'wheelie' looked impressive. It was the first day of training for the air parade, which accounted for some appreciable deviations



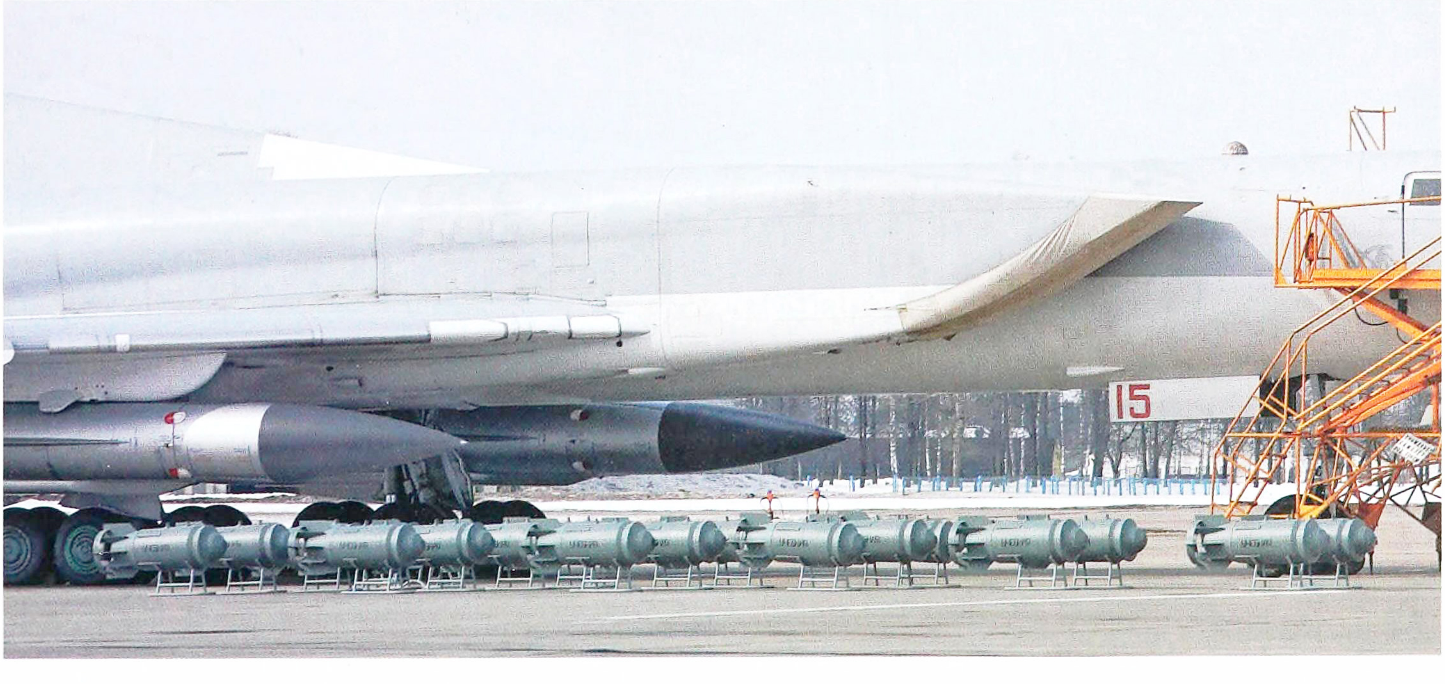


from the time schedule – the departure sequence in the morning had been a bit drawn out.

It was planned that the machines participating in the V-Day parade would appear over Red Square sporting new Russian Air Force insignia which had been proposed by the Russian Government and approved by the State Duma (the lower house of the Russian Parliament). The proposed new insignia basically represented the same red pentastar, but now it was edged in dark blue and white with a thin red outline (in other words, the existing red/white outline to the star had been augmented by a blue border inside it, the red portion having shrunk appreciably as a result). This new insignia was treated with mixed feelings; the opponents rightly pointed out that the blue border made the red colour of the star indiscernible from a distance, thereby complicating identification – not to mention the fact that it was an outrage against the traditions of the Air Force whose aircraft and crews had fought for the homeland under the sign of the red star, not a goodness-knows-what star. Actually the new insignia had been

Upgraded Tu-160 '08 Red' and Tu-95MS '15 Red' after arriving at Kubinka AB for the 'Presidential' show in March 2009.

Tu-22M3 '15 Red' at Kubinka with two Kh-22Ms and an array of bombs during the March 2009 show.



already applied to some military aircraft (notably those of the FSB Border Guards) in advance of the appropriate legislation; however, the Federation Council (the upper house) vetoed the bill about their introduction and the new stars had to be hastily replaced with the old ones. Haste makes waste, you know.

On 7th May the dress rehearsal of all participants of the parade took place. According to the estimates of some experts, the V-Day parade had cost the Russian budget half a billion roubles, of which RUR 200 million had been allocated from the Moscow city budget.

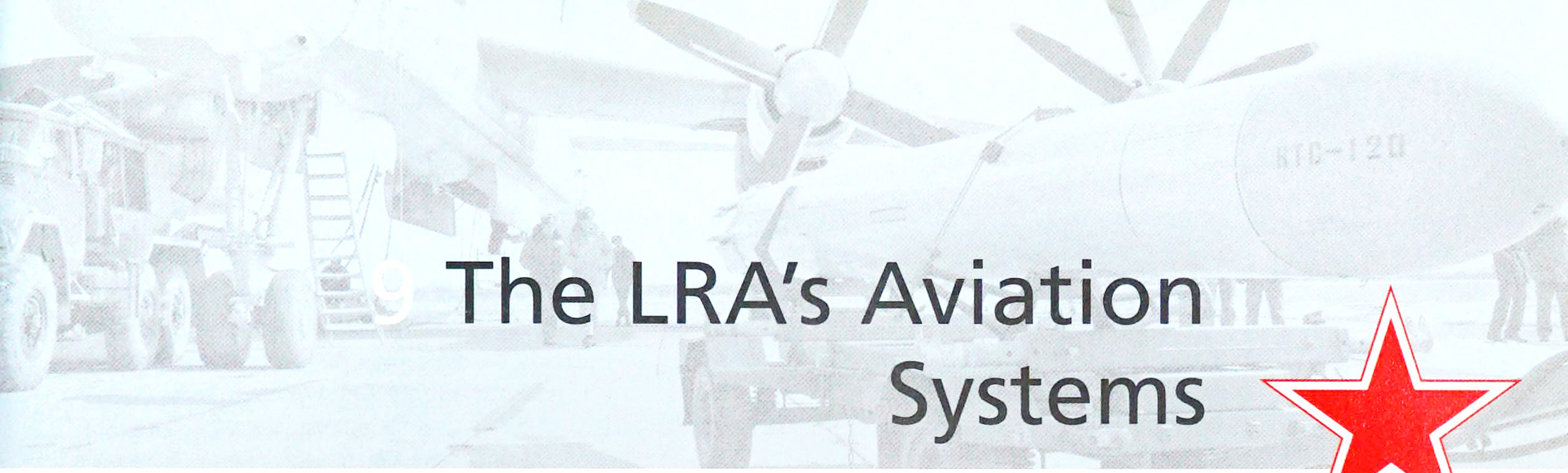
The parade formation of military aircraft that passed over Red Square on 9th May 2009 differed somewhat from the previous year's parade as regards composition and order of appearance. For example, the IL-78M/Tu-160 combination ('31 Blue' and '10 Red' *Nikolay Kuznetsov* respectively) was escorted by four modernised MiG-31BM interceptors from Savasleika AB instead of two, and the IL-78M/Tu-95MS combo ('36 Blue' and '21 Red' *Samara* respectively) was likewise escorted by four MiG-29 *Fulcrum-Cs* (two plain grey examples from Kursk plus two in blue display colours from Lipetsk) instead of two. A total of 69 flying machines of the Russian Air Force – 17 helicopters and 52 fixed-wing aircraft – had taken part in the V-Day flypast, which was more than twice the number of aircraft involved in the 2008 parade.

Tu-22M3 '12 Red' and Su-24M '57 Red' put on a flying display during an 'open house' at the Akhtoobinsk test centre.

Two months prior to the V-Day parade in Red Square, in March 2009, Kubinka AB became the scene for an equally grandiose display of military hardware (above all, aircraft and aviation weapons, including the latest ones). It's no secret that after the Russian military operation undertaken in August 2008 with the purpose of 'compulsion of Georgia to peace' the Russian political leaders, who were dissatisfied with the 'quality' of the operation and excessive losses suffered by the Russian Air Force, demanded that the Russian MoD top brass should immediately take measures not only to increase the command and control efficiency but also to speed up the introduction of the latest combat hardware in the ground forces and the Air Force. President of Russia Dmitriy A. Medvedev, being the Supreme Commander-in-Chief, pledged to keep a tab personally on the reforming and re-equipment of the Armed Forces. Six months after the August war the Supreme Commander-in-Chief decided to check personally how his order was being carried out.

By the end of March two dozen aircraft and helicopters – both production models in first-line service and new models then under test – had flown in to Kubinka AB; these included three aircraft of the Long-Range Aviation. Two of them – Tu-95MS '15 Red' *Kaluga* and Tu-160 '08 Red' *Vitaliy Kopylov* – came from Engels-2 AB; the third, Tu-22M3 '15 Red', arrived from Shaikovka AB. The *Bear*'s weapons bay housed a Kh-55SM cruise missile; a complete set of bomb armament had been arrayed next to the *Backfire*, which was carrying two Kh-22 supersonic missiles on the wing pylons. A closed hangar at the display base, which was off limits to the reporters who had arrived for the event, contained the latest types of aviation weapons, including the new Kh-555 and Kh-101 ALCMs, which were shown to the President. Having examined all the exhibits and made a familiarisation flight in the WSO's seat of the new Su-34 tactical strike aircraft ('03 Red', the third production example), the head of state left the scene.

On 18th-23rd August of the same year Zhukovsky hosted the MAKS-2009 international airshow. The static display included the abovementioned Tu-95MS '21 Red' *Samara* and Tu-160 '10 Red' *Nikolay Kuznetsov*.



9

The LRA's Aviation Systems

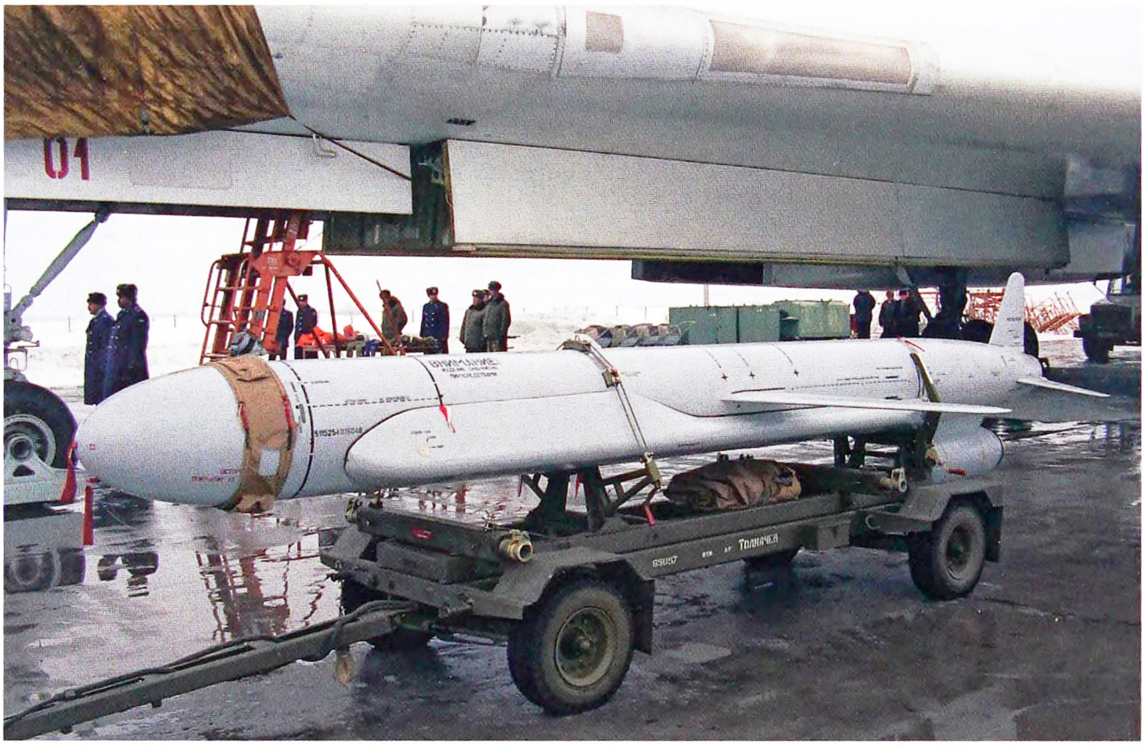
For the last two decades the Russian Air Force's Long-Range Aviation has been relying on the proverbial 'three whales' – that is, three air-launched missile systems based on the Tu-160, Tu-95MS and Tu-22M3 missile carriers. The first two types are carriers of air-launched cruise missiles with a large radius of action and have intercontinental range thanks to their IFR capability. The third aircraft is considered a long-range (but non-strategic) bomber/missile carrier. It is armed with supersonic air-to-surface missiles having a range of several hundred kilometres and intended for striking at large military targets (carrier task forces, airfields, military bases and the like), and also radars and other electromagnetic pulse emitters of the potential adversary. The Tu-22M3 is also able to carry conventional free-fall bombs and fulfil the long-range bomber role. As a bomber the *Backfire* had made its mark back in Soviet days during the Afghan War. Operating from airbases on Soviet territory, groups of Tu-22M3s crossed into Afghanistan to bombard Mujahideen bases and supply convoys. Cases are on record of *Backfires* in action during the First Chechen War, during the Russian period. In August 2008 Russian Air Force Tu-22M3s were involved in the five-day war in the Caucasus – the 'operation for compelling Georgia to peace'; in the course of this operation the Georgian air defence forces managed to shoot down one *Backfire-C* with a Ukrainian-manufactured Buk-M1 surface-to-air missile (this episode is described in more detail in Chapter 5).

By the end of 2009 the fleet of the Russian Air Force's Long-Range Aviation totalled 14 (some sources say 15) Tu-160 aircraft and 64 Tu-95MS aircraft (four more *Bear-Hs* are used for aircrew training purposes). There is no telling how many of them are routinely airworthy and combat-ready. According to some sources, 20 heavy missile carriers fly more or less regularly. It is even more difficult to define the number of operational Tu-22M3 long-range bombers/missile carriers, especially after the latest stage of the DA's reforming in 2009 when four available regiments have been united to form two air bases, part of the *Backfire* fleet being relegated to the reserve.

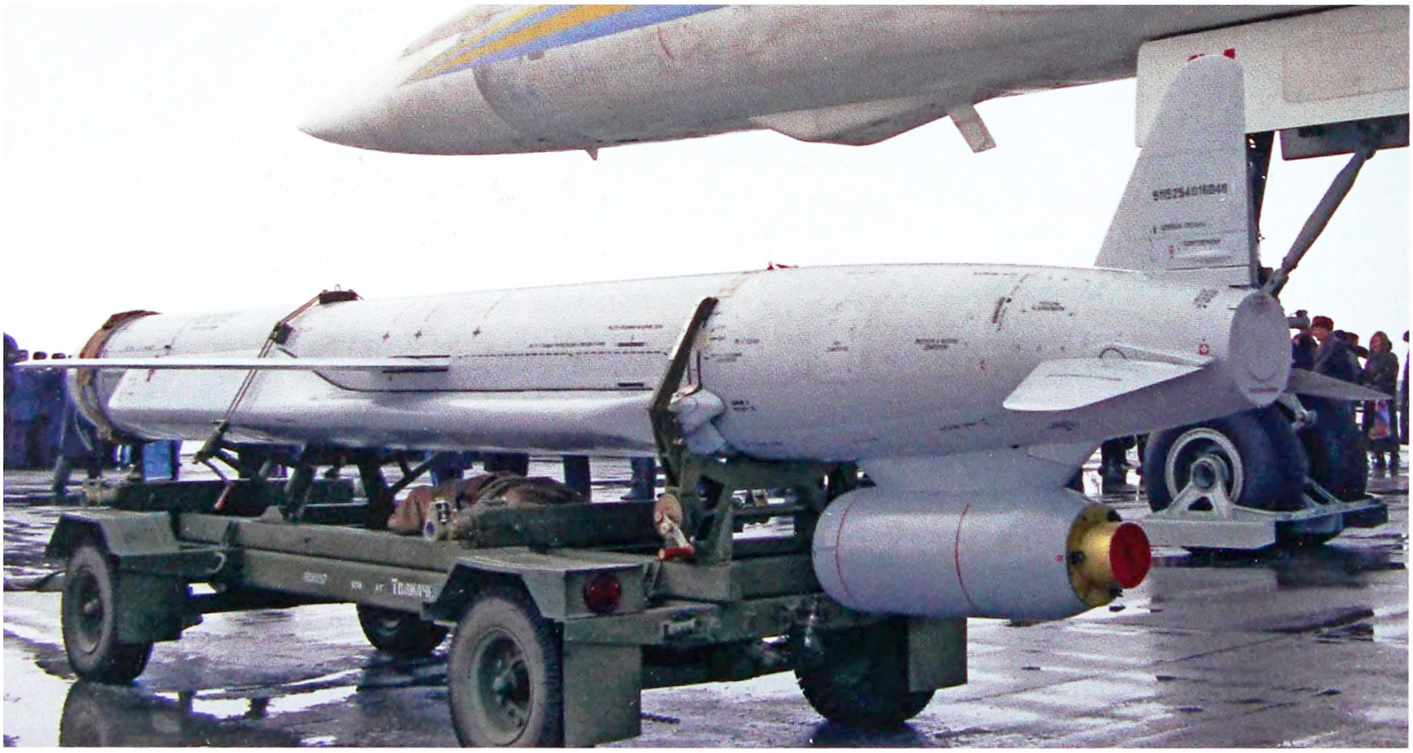
Previous page: A 52nd GvTBAP Tu-22M3 takes off with a Kh-22NA missile semi-recessed in the fuselage.

The Long-Range Aviation's combat capability is severely impaired by the absence of a stock of replacement engines – all of the three engine types powering the DA's strike aircraft (Kuznetsov NK-25 and NK-32 afterburning turbofans and NK-12MP turboprop) are no longer in production. Failed engines are either repaired or replaced with engines sourced from stored aircraft, which are cannibalised for spares. The situation with the Tu-160s is especially difficult, as there are only 15 or so of them, and the Russian Air Force is simply not in a position to maintain all of them simultaneously in 100% mission readiness.

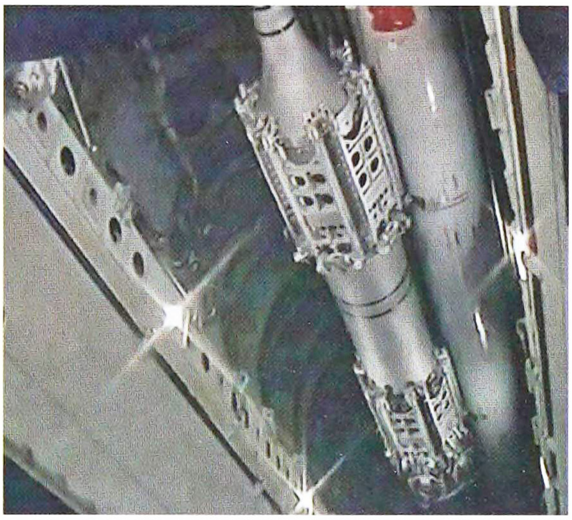
In general, the technical equipment level of the DA has been drawing a lot of criticism lately in the Russian press. Many military experts, aviation experts and journalists express the view that the aircraft and airbases of the DA are vulnerable and long since outdated, and that in the event of a military conflict they will be an easy target for the adversary's weapons, who-



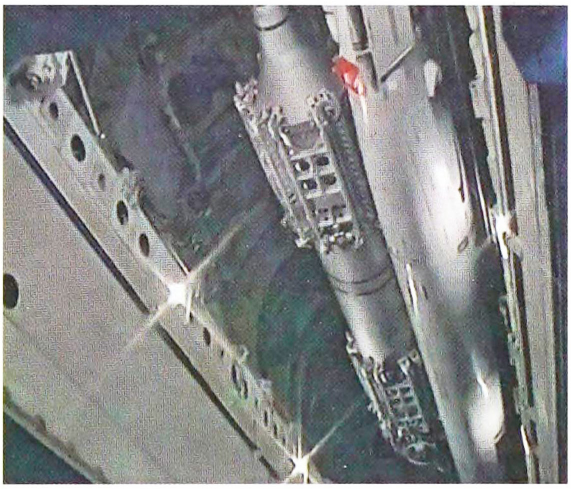
A Kh-55SM missile in cruise configuration sits on a ground handling dolly beside Tu-160 '01 Red'. The missile's conformal tanks are clearly visible.

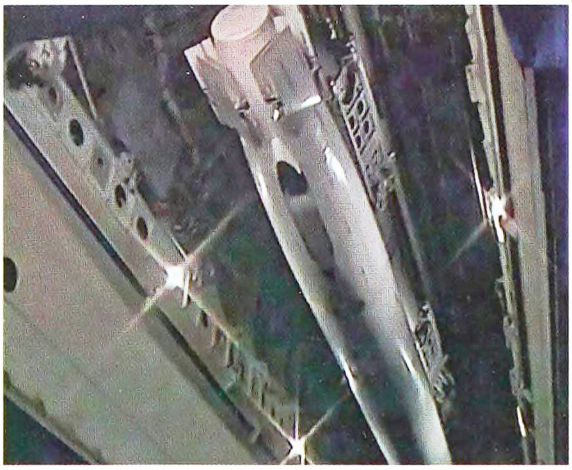


This view shows the Kh-55SM's tail surfaces and extended RDK-300 turbofan.



The MKU-6-5 rotary launcher of a Tu-160 rotates, bringing a missile into position for launch.





A Kh-55 is almost ready for release. Note the folded tail surfaces and the stowed engine.

ever the adversary may be. Serious doubts have been expressed concerning the DA's ability to perform its assigned tasks because of the allegedly high vulnerability of the strategic aircraft created in Soviet times. The basic argument in support of this view is the reports of the Russian aeroplanes being routinely intercepted by NATO and Japanese fighters during combat duty or exercises. However, critics on this aspect totally miss a number of important points. Firstly, a real-life combat sortie by DA crews (as distinct from training sorties) does not at all presuppose obligatory flight along the set routes followed during exercises, that is, close to the NATO and Japanese air defence zones. Secondly, the wartime flight profiles of planes during a combat sortie can differ considerably from the peacetime ones (consider that two of the three types on strength with the DA are multimode aircraft). Thirdly, during exercises the onboard ECM and ESM suite is usually not engaged (so as not to give the NATO fighter pilots a chance to fix its operating modes and frequencies of the electronic subsystems); hence the fighters have little trouble detecting the Russian bombers. Last but not least, in keeping with international weapons limitation treaties the Russian Ministry of Defence warns the interested parties in advance about the date, time and geographical zone of the forthcoming exercises, which again makes it possible to track down and shadow the Russian planes without any trouble.

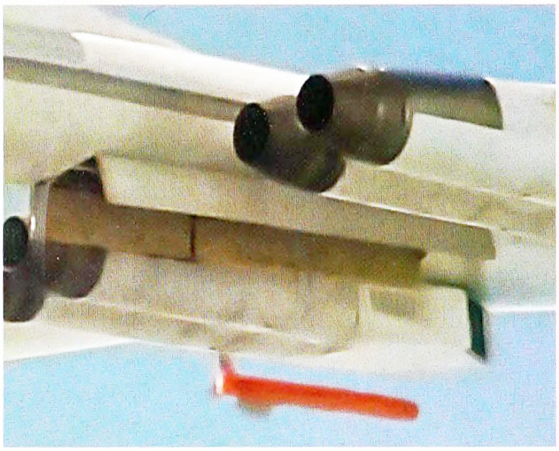
To give a better idea of the Russian DA's real potential, it is necessary to remind the reader of each of the three bomber types' combat capabilities.

The basic strike power of the DA is certainly the air-launched missile system built around the Tu-160. The 'swing-wing' aircraft is multimode, that is, it can fly a subsonic or supersonic profile at low, medium and high altitudes.

The Tu-160's maximum ordnance load is 40 tons (88,180 lb). All armament is carried internally in two tandem weapons bays measuring 11.28 x 1.92 m (37 ft 0 in x 6 ft 3$^{19}/_{32}$ in).

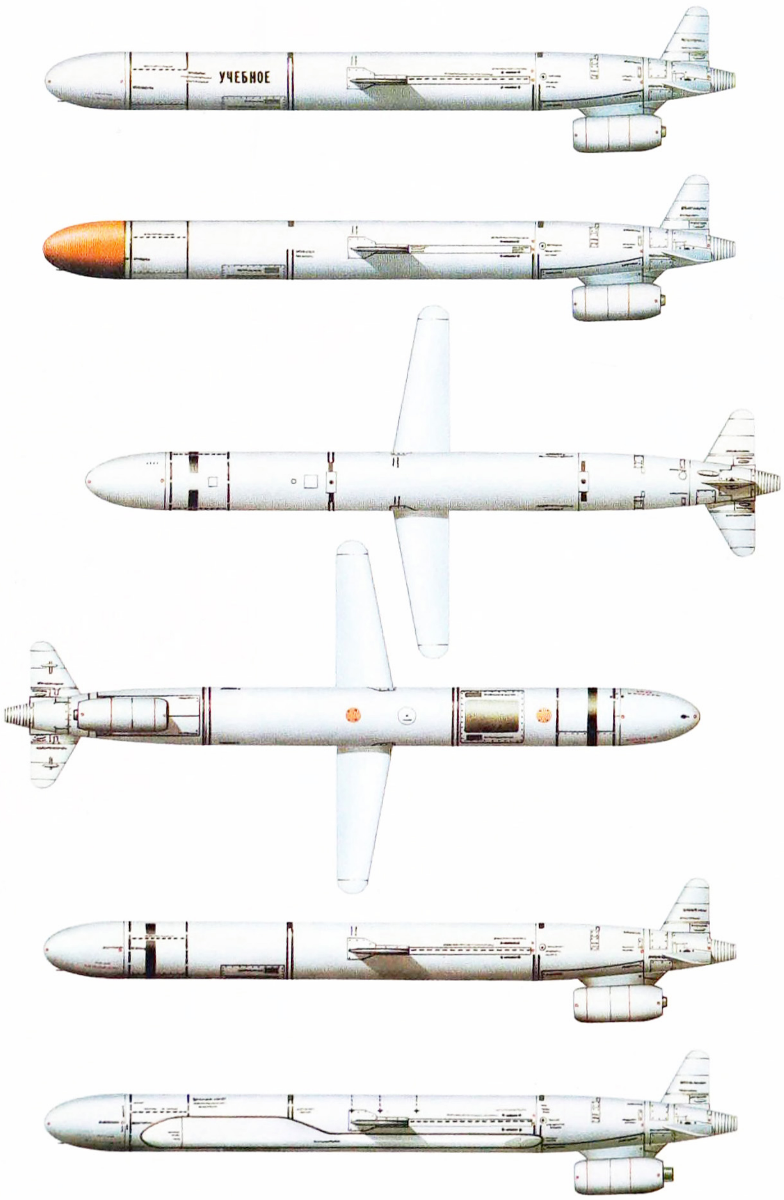
The principal armament consists of air-to-surface missiles designed for delivering nuclear strikes against targets with known co-ordinates. One is the Raduga Kh-55/Kh-55SM (AS-15/AS-15B *Kent*) strategic air-launched cruise missile; 12 of these weapons can be carried on two MKU-6-5U rotary launchers (***mno**gopozitsi**on**naya kata**pool't**naya oosta**nov**ka* – multi-position ejector unit. Before launch a digital map of the route to the target is downloaded into the missile's computer by the SURO-70 missile control system (*sis**tem**a oopravl**en**iya ra**ket**nym o**roo**zhiyem*).

The other missile carried by the *Blackjack* is the Raduga Kh-15S (AS-16 *Kickback*) designed for destroying the enemy's air defence system. 24 of these short-range ASMs can be carried; in this case the Tu-160 operates in low-level mode. Weapons aiming is done by means of the Obzor radar and the OPB-15T electro-optical sight.



An orange-painted Kh-55 test round is ejected from a Tu-160's rear weapons bay. The engine and tail surfaces are deployed but the wings have yet to unfold.

Additionally, the Tu-160 was intended to carry other types of weapons, including conventional free-fall bombs. This bombing capability is being incorporated under an upgrade programme.



Top to bottom: The Kh-55U training round, the basic Kh-55 (*izdeliye* 120), three views of the Kh-55-OK (*izdeliye* 124) and the long-range Kh-55SM (*izdeliye* 125).

The *Bear-H* was built in two versions: the Tu-95MS-6 and the Tu-95MS-16. The former carried six Kh-55 missiles internally, while the Tu-95MS-16 additionally had four pylons with multiple ejector racks for carrying ten missiles under the wings, bringing the total to 16. The pylons were removed in accordance with the START II treaty; now, however, the pylons are being reintroduced on the Tu-95MSM for carrying Kh-101/Kh-102 missiles. Again, the Tu-95MS is equipped with the Obzor radar.

The offensive weapons of the Tu-22M3 include both missiles and bombs. The primary missile armament consists of up to three Kh-22N, Kh-22NA or Kh-22MA supersonic cruise missiles intended for use against large maritime targets and ground targets with a high radar signature at a range of 140-500 km (87-310 miles). One missile is carried semi-recessed in the fuselage on a BD-45F pantographic rack, two more under the wing gloves on BD-45K fixed pylons; normally one or two are carried, the maximum complement of three being the overload configuration.

Another missile carried by the *Backfire-C* is the hypersonic Kh-15S aeroballistic missile intended for destruction of stationary ground targets or radars. Six such missiles are carried internally on an MKU-6-1 rotary launcher, four more can be suspended singly under the wing gloves and the air intake trunks.

The bomb armament comprises high-explosive and nuclear free-fall bombs to a total weight of 24000 kg; of these, 12,000 kg (22,045 lb) are carried on cassette racks in the bomb bay and the remainder on four MBD3-U9M-0 nine-shackle multiple ejector racks (MERs) under the wing gloves and the air intake trunks. Weapons aiming is done by means of the PNA-D radar and the OPB-15T electro-optical sight.

The Tu-22M3's typical ordnance load options are shown in the table.

Some of the Tu-22M3's weapons options

Ordnance type	Quantity
FAB-100	69
FAB-250	69
FAB-500	42
FAB-1500	8
FAB-3000	2
FAB-500 + FAB-1500	24+8
FAB-500 + Kh-22	24+1
500-kg anti-shipping mines	42
1,500-kg anti-shipping mines	8

Here are a few details of the missiles used on the DA's current aircraft.

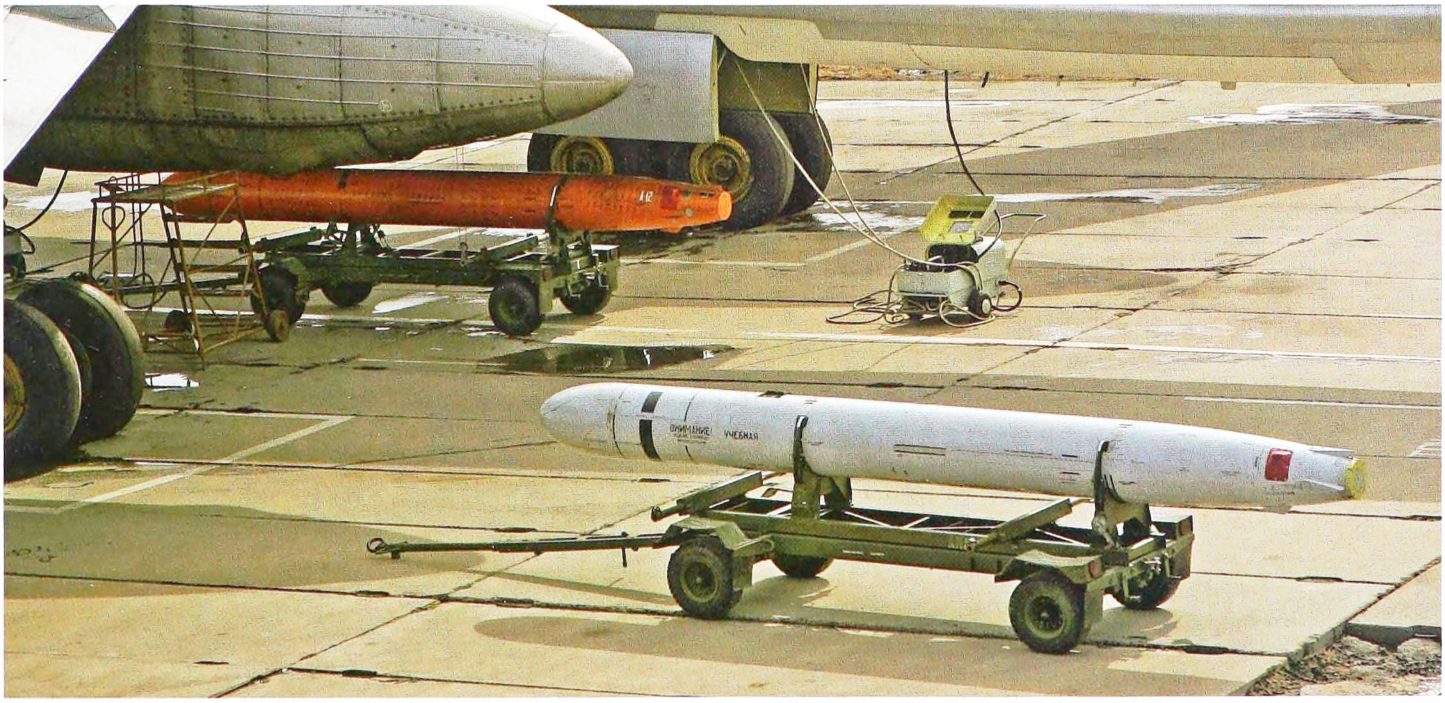
The Kh-22M (*modifi***tsee***rovannaya* – modified) entered Soviet Air Force service in 1979; it was an improved version of the Kh-22 (AS-4 *Kitchen*) missile carried by the Tu-22K *Blinder-B*. It has a conventional airframe with mid-set cropped-delta wings swept back 75° and conventional all-movable tail surfaces. Being optimised for the Tu-22M *Backfire*, the Kh-22M differed from the original model primarily in being powered by an Isayev S5.33M twin-chamber liquid-fuel rocket motor instead of the Tumanskiy R201-300 rocket motor. In launch mode, with both chambers running, the S5.33M delivers 7,000 kgp (15,430 lbst) at 10,000 m (32,810 ft); in cruise mode it delivers either 600 or 1,300 kgp (1,320 or 2,865 lbst). Another difference lies in the modified APK-22A autopilot.

Actually the Kh-22M entered service ahead of the *Backfire* when the Tu-95K-22 *Bear-G* was included into the inventory in 1975. Like its precursor, the Kh-22M came with three different guidance systems. The basic Kh-22MA used on the Tu-22M3 has a modified PMG active radar seeker head, hence the A.

The Kh-22N (AS-4C) version was added to the *Backfire*'s weapons in 1976. Its main new feature is that the missile has two launch altitude ranges – high (8,000-13,000 m/26,250-42,650 ft) and low (1,000-8,000 m/3,280-26,250 ft); hence the N suffix (***niz****kovy***sot***naya* – low-altitude). The low range was introduced to maximise air defence penetration probability. Having picked a target, the navigator enters the launch altitude into the missile's guidance system. Hence the Kh-22N has an APK-22M autopilot. The Kh-22N comes in two versions featuring different guidance systems (PMG or PSI) and accordingly different warheads (nuclear/conventional or nuclear only). The dead reckoning variety with the PSI system is designated Kh-22NA.

The Kh-22N is powered by an Isayev S5.44 rocket motor with a longer operation time, especially in the 600-kgp cruise mode at low altitudes. Depending on the launch altitude, the missile's maximum 'kill' range is 200-360 km (124-223 miles) in the high range and 80-240 km (50-149 miles) in the low range. In the event of a low-range launch the missile's cruising speed is restricted to Mach 2.2 or 2,200 km/h (1,366 mph). The cruise altitude is 23,000 m (75,460 ft) for the high range and 12,000 m (39,370 ft) for the low range.

The Kh-55 (RKV-500, AS-15 *Kent*) introduced in 1984 is a subsonic aerial vehicle. The mid-set, high aspect ratio unswept wings are stowed inside the fuselage for ground handling and when the missile is on the launcher (or pylon). To avoid increasing the fuselage diameter the port and starboard wings are stowed in two parallel planes above one another, and this lop-sided arrangement remains when they are deployed. The wings are one-piece glassfibre composite structures lacking control surfaces. Extension is by means of a pyrotechnically-actuated mechanism with a synchronisation feature preventing asymmetrical deployment. The all-movable tail surfaces are glassfibre composite structures; they

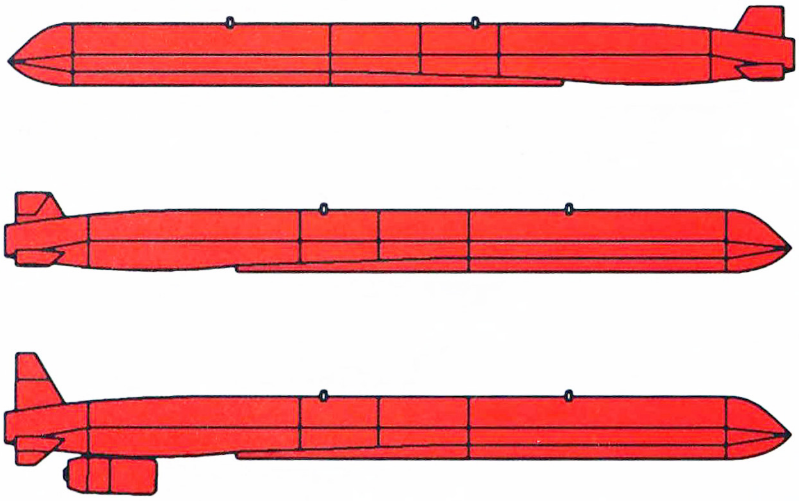


Two Kh-55U training rounds are ready for loading into a Tu-95MS; note the absence of tail surfaces.

The Tu-95MSM prototype with four pairs of red-painted Kh-101 test rounds under the wings.

have double-action folding and lie flat against the rear fuselage. The tail surfaces are likewise deployed by a pyrotechnic actuator.

The RDK-300 turbofan rated at 300-350 kgp (660-770 lbst) is housed in a nacelle stowed in the rear fuselage and extended by a pantographic mechanism immediately before launch. The engine's systems are self-contained and maintenance-free. The engine features full authority digital engine control. It is started by windmilling after the missile is ballistically ejected. At a safe distance from the aircraft the wings and tail surfaces unfold and the Kh-55 commences autonomous flight along the pre-programmed route to the target. To avoid detection the Kh-55 cruises at 40-110 m (130-360 ft), making use of the terrain-following feature.



The Kh-101 missile with the engine and tail surfaces stowed and deployed.

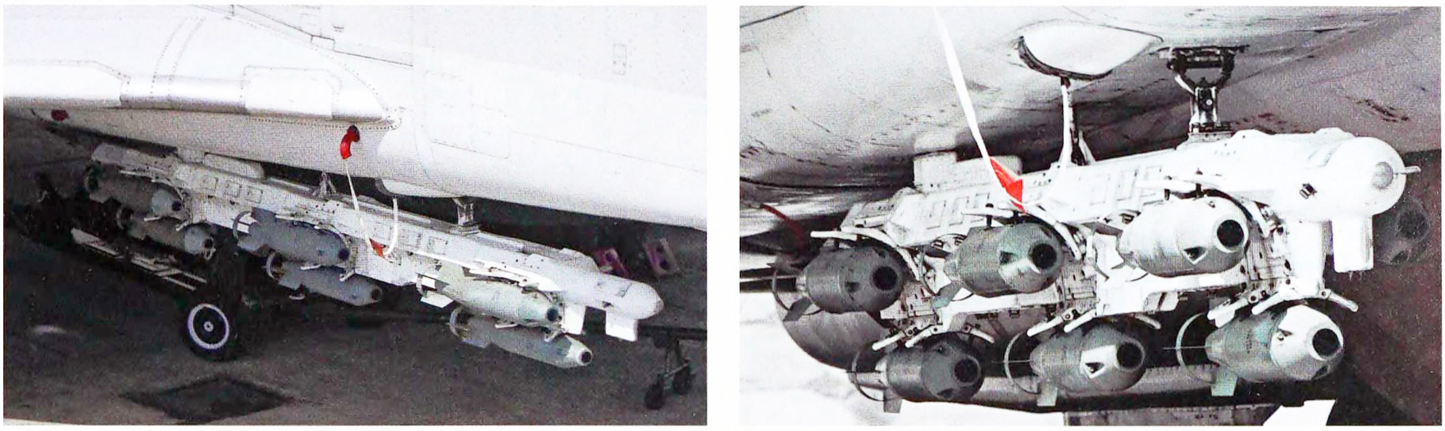
The Kh-55 has a warhead yield of 200 kilotons. Three air-launched versions are available: the basic Kh-55 (*izdeliye* 120), the Kh-55-OK (*izdeliye* 124) and the long-range Kh-55SM (RKV-500B/*izdeliye* 125, AS-15B); the latter features conformal tanks of complex shape on the forward fuselage sides. The Kh-55 is also available in ground- and sea-launched versions.

The Kh-555 cruise missile recently added to the Russian Air Force inventory represents an in-depth upgrade of the Kh-55 with a reduced radar cross-section and an improved navigation system that has considerably increased the target engagement accuracy. Range has been increased almost to 5,000 km (3,105 miles). Test launches of these missiles were performed in October 1999, whereupon the Russian government took the decision to launch series production.

Developed as a successor to the obsolete Kh-22 and KSR-5 missiles, the Kh-15 (*izdeliye* 115, AS-16 *Kickback*) is the Russian counterpart of the US AGM-69 SRAM – a hypersonic wingless missile with a two-stage solid-fuel rocket motor utilising a ballistic trajectory. The rocket motor's optimum burn characteristics are provided by a specially shaped recess. The missile's airframe comprises a cylindrical body and three identical all-movable tail surfaces set at 120° with respect to each other. Stabilator span is 0.92 m (3 ft 0$\frac{7}{32}$ in). The airframe is made of titanium and wolfram/molybdenum alloys and heat-resistant steel; it is heat-insulated and covered with a special metal-based coating reducing the missile's radar signature.

The missile is carried internally on MKU-6-1 rotary launchers by the Tu-22M3, Tu-95MS and Tu-160; the latter type has a complement of twelve Kh-15s, while the other two can carry six each. After launch at a maximum range of 150 km (93 miles) the missile goes ballistic, accelerating to Mach 5 and entering the stratosphere with an apogee at up to 40 km (131,230 ft). The flight trajectory is formed by the aircraft's targeting system to suit the applicable launch range while the missile is still on the launcher.

The baseline Kh-15 entered service in 1980. It is an anti-shipping missile designed for destroying surface ships with a high radar signature up to the size of a cruiser and equipped with a shaped-charge/high-explosive warhead. It features a dual guidance system with an INS using pre-entered co-ordinates for initial guidance and radar homing for terminal guidance. The Kh-15P, which was added to the inventory in 1988, is an anti-radar missile designed to facilitate air defence penetration; it features a passive radar seeker head and a fragmentation warhead. The upgraded



An MBD3-U9M-0 multiple ejector rack with nine 100-kg practice bombs under the starboard air intake trunk of a Tu-22M3.

Kh-15S developed in 1993 has an upgraded ECM-resistant active radar seeker head and a conventional warhead; it is also offered for export as the Kh-15SE.

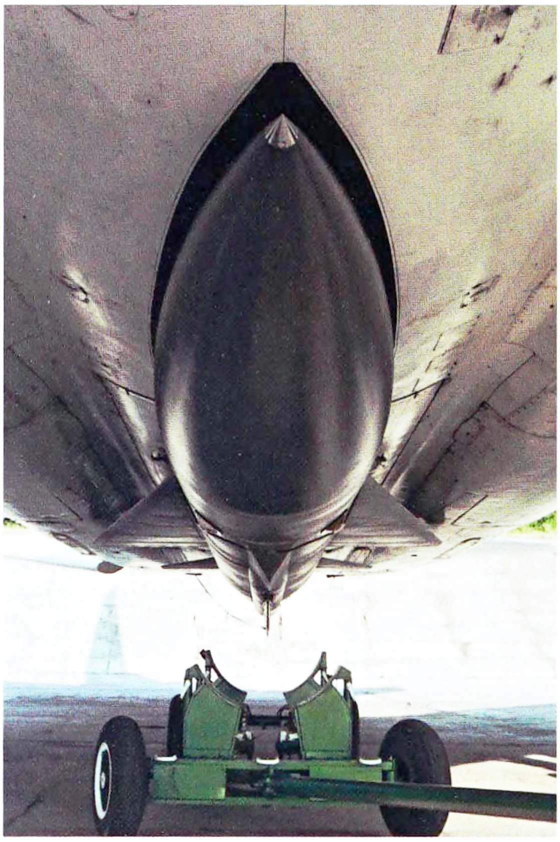
Analysis of unclassified information on the DA's development programmes testifies that the Russian Air Force command is aiming to transform the DA's strategic and long-range bombers into multi-role aircraft capable of operating in both nuclear and conventional armed conflicts of various intensity. It is necessary to observe that, like the USAF's SAC, the DA strives to give its missile carriers the ability to strike at targets with precision-guided weapons without entering the kill zone of the enemy air defences. In Russia this trend is realised through mid-life update programmes for operational aircraft – first of all the Tu-95MS and Tu-160 strategic missile carriers, and it is with these programmes that the DA's immediate future is concerned. Most of the individual aircraft now in DA service are 10 to 20 years old, which means they have enough service life remaining to stay operational at least until 2020-2025 – and possibly much longer, if one considers the experience gained with the Tu-16 and early Tu-95 variants, which remained in service for almost 40 years.

In the Russian press, the Air Force Commanders-in-Chief and the Commanders of the Long-Range Aviation have repeatedly commented on the forthcoming complete upgrade of the DA's aircraft fleet. Thus, in 2008 the then Commander of the 37th (Strategic) Air Army Maj.-Gen. Pavel V. Androsov stated that '*...next year the Tu-160*

Air-to-surface missiles used by the Long-Range Aviation

	Kh-22N	**Kh-55**	**Kh-55SM**	**Kh-15S**
Length overall	11.67 m (38 ft $3\frac{7}{16}$ in)	5.88 m (19 ft $3\frac{1}{2}$ in)	6.04 m (19 ft $9\frac{51}{64}$ in)	4.78 m (15 ft $8\frac{3}{16}$ in)
Wing span	3.0 m (9 ft $10\frac{1}{8}$ in)	0/3.1 m (10 ft 2 in)*	0/3.1 m (10 ft 2 in)*	0
Body diameter	0.92 m (3 ft $0\frac{7}{32}$ in)	0.556 m (1 ft $9\frac{57}{64}$ in)	0.77 m (2 ft $6\frac{5}{16}$ in)	0.455 m (1 ft $5\frac{29}{32}$ in)
Launch weight, kg (lb)	5,767-5,805 (12,713-12,797)	1,300 (2,870)	1,700 (3,750)	1,200 (2,645)
Warhead weight, kg (lb)	900 (1,980)	410 (903)	410 (903)	150 (330)
Launch range, km (miles)	80-360 (50-223)	2500 (1,552)	3000 (1,860)	150 (93)
Launch altitude, m (ft)	1,000-13,000 (3,280-42,650)	20-12,000 (660-39,370)	20-12,000 (660-39,370)	300-22,000 (9,840-72,180)
Flight altitude, m (ft)	12,500/22,500 (41,010/73,820)†	40-110 (130-360)	40-110 (130-360)	up to 40,000 (131,280)
Speed, km/h (mph)	2,200/3,600 (1,366/2,236)†	936 (581)	936 (581)	n.a.
Mach number	3.0	0.8	0.8	5.0
Aircraft speed at launch, km/h (mph)		540-1,050 (335-652)	540-1,050 (335-652)	n.a.

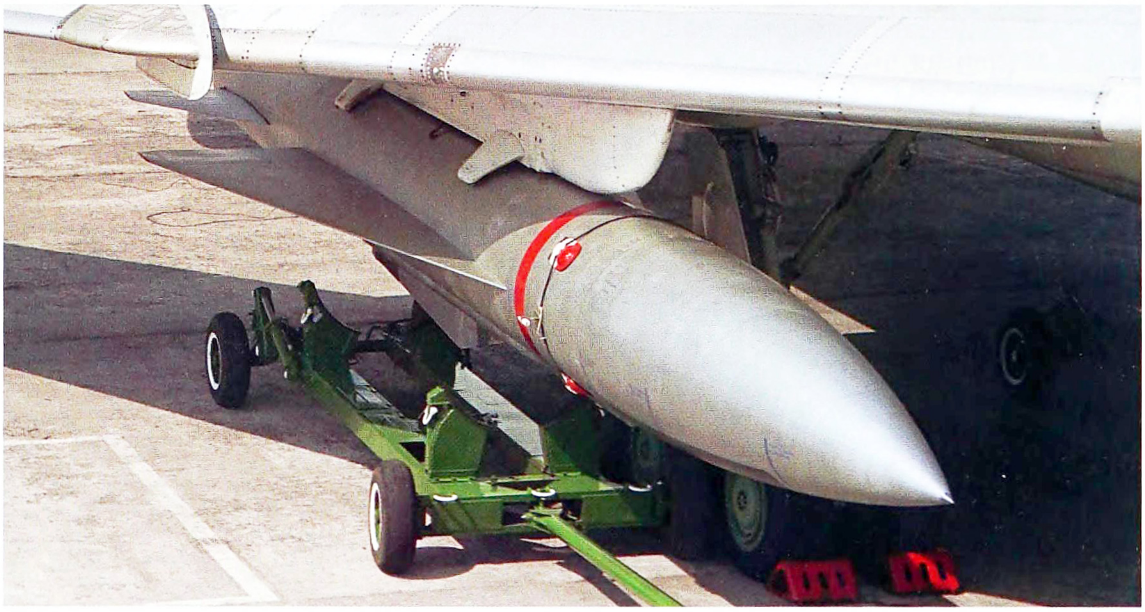
* Wings folded/deployed; † High/low launch altitude range



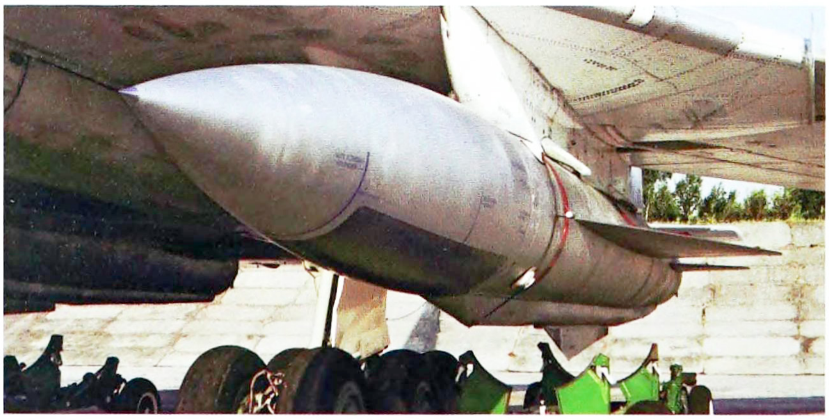
A Kh-22N missile on the centreline station of a Tu-22M3. Note the full-face radome of the N version.

and Tu-95MS strategic bombers, and also the Tu-22M3 long-range bombers, will undergo a massive upgrade… The age of our planes today is about 15 years, they have used up only a small part of their service life, therefore next year we plan to perform an in-depth modernisation of our aviation weapons systems'. He went on to state that the Air Force had plans to install new navigation/attack suites making it possible to use unguided weapons, such as bombs, with high accuracy. *'It means that the circular error probable (CEP) during bombing will be no more than 20 m [65 ft], which is extreme accuracy for our types of aircraft'* – said Androsov. He added that it was planned to increase the range and endurance of existing aircraft and to improve their defensive avionics suites.

The upgrade programme began in 2008 and concerns mainly the avionics and equipment of the missile carriers and integration of new weapons – in particular, new medium- and long-range cruise missiles (Kh-555 and Kh-101 respectively) with conventional warheads.

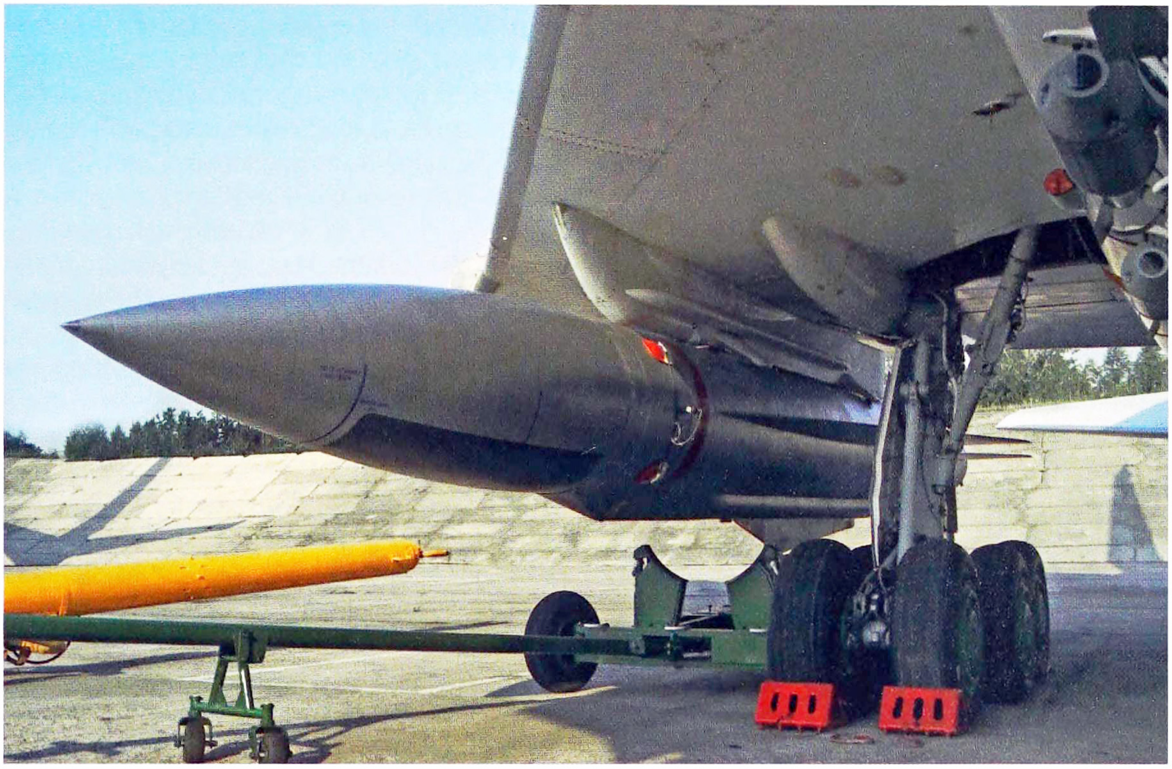


A Kh-22NA on the starboard BD-45K pylon of a Tu-22M3. The red band indicates an inert round. Note the red/white 'remove before flight' covers.



Unlike the Kh-22N, the NA version has a metal nose fairing with a ventral dielectric panel.

Several years ago new types of weapons have passed the basic test programme in their non-nuclear version and the Air Force command developed an up-arming programme for the Tu-95MS and Tu-160. The programme is moving ahead as state money is allocated, though not as quickly as the Russian military had hoped – especially now that the global economic crisis has set in. In parallel, service life extension work is going ahead, which will allow the aircraft to remain it service after 2020-2025.



An inert Kh-22NA (note the red stripe) under the starboard wing of a Tu-22M3.

The Tu-95MS upgrade, which is carried out by the Russian MoD's 360th ARZ (Aircraft Repair Plant) at Dyagilevo AB, Ryazan', has the highest priority. The plant has been refurbishing DA aircraft for 50 years now; currently it handles IL-78 tankers, Tu-95MS and Tu-22M3 bombers. The 360th ARZ mastered *Bear* repair techniques in 1993 when the Russian DA lost the largest plant handling the type in Belaya Tserkov' (=White Church), which was in newly-independent Ukraine.

The upgraded *Bear-Hs* (designated Tu-95MSM) will carry Raduga Kh-101 strategic cruise missiles with conventional warheads and their Kh-102 nuclear-tipped variant. The missile weighs some 2,200-2,400 kg (4,850-5,290 lb) and has a 400-kg (880-lb) warhead. According to press reports, the Kh-101 has a maximum range of 5,000-5,500 km (3,107-3,418 miles), a variable flight profile at altitudes ranging from 30-70 m to 6,000m (98-230 ft to 19,680 ft), a cruising speed of 190-200 m/sec (684-720 km/h; 424-447 mph) and a maximum speed of 250-270 m/s (900-972 km/h; 559-604 mph). The radar cross-section is a mere 0.01 m^2 (0.11 sq ft). The Kh-101 has an electro-optical course correction system and a TV guidance system for terminal guidance; this ensures a CEP of some 12-20 m (40-65 ft).

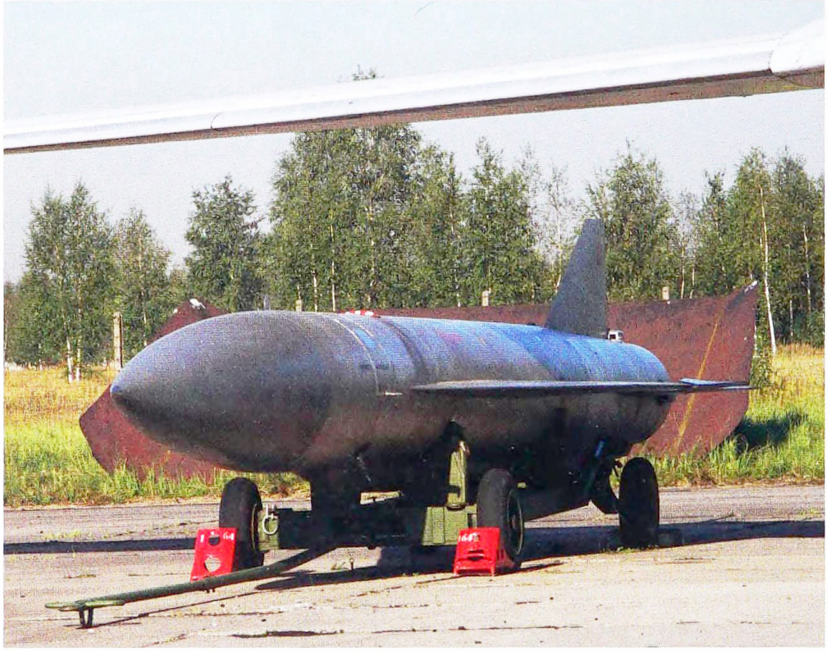
The Tu-95MSM is able to carry up to eight under the wings on paired pylons. The upgraded Tu-160 can take up to 12 Kh-101s on two rotary launchers.

Test launches of the Kh-101 began in the 1990s. In October 1999 the new missile was ordered into production. Characterising the capabilities of the Kh-101/Kh-102, a former Russian Air Force C-in-C said, *'A single Tu-160 toting a dozen such weapons is able to fulfil a task that previously would have required an entire regiment'*.

Another type of armament considered for re-equipping the Russian strategic missile carrier fleet is a medium-range air-launched cruise missile provisionally designated Kh-SD (SD stands for ***sred****ney* ***dahl'****nosti* – medium-range missile). It is proposed to use some elements of the Kh-101 in the design of this missile, particularly its guidance system.

It is considered that the introduction of new high-precision ALCMs will give the Long-Range Aviation a new quality which will strengthen its role in maintaining Russia's military security at any turn of events in the world. As for the Kh-101/Kh-102, the aircraft can launch them long before it is detected by modern air defence systems.

The Tu-160 MLU programme is making slow progress. The upgraded aircraft will be able to carry free-fall bombs in addition to the latest types of cruise missiles. The upgrade is being done by the manufacturer, the KAPO plant in Kazan'. Tu-160 '19 Red' *Valentin Bliznyuk* was the first operational *Blackjack* to be upgraded. On 5th July 2006 it arrived at Engels from the Tupolev PLC's flight test facility in Zhukovskiy. In early 2007 two more



A Kh-22M missile on its ground handling dolly.

Blackjacks, '08 Red' and '10 Red', were sent to Kazan' from Engels for overhaul and upgrading. They were supposed to return to service at the end of the year; however, the work took a little longer than expected. '08 Red' *Vitaliy Kopylov* was ceremonially handed over to the Russian Air Force on 29th April 2008. A year later, in March 2009, this aircraft was demonstrated to President Dmitriy A. Medvedev at Kubinka AB during a special military aircraft display for the top government officials. One more upgraded Tu-160, '10 Red' (later named *Nikolay Kuznetsov*), was redelivered several months later.

Additionally, work on increasing the service life of operational Tu-160s to 1,500 hours is being performed on site at Engels-2 AB. The state has allocated funds for purchasing spares and accessories for the *Blackjacks*.

An upgrade of the Tu-22M3 long-range bomber is also reportedly to be done by the same repair factory. Unofficial reports say that the modernised *Backfire-C* can carry Kh-101 long-range cruise missiles or six to eight Kh-SD medium-range ALCMs internally. However, its principal weapon will be the Kh-32 supersonic air-to-surface missile developed by NPO Raduga as an upgrade of the familiar Kh-22. It features an improved rocket motor and a new seeker head.

Raduga had offered the Kh-32 as a way of increasing the combat efficiency of the Tu-22Ms back in the 1980s. The old Kh-22 anti-shipping missile was severely handicapped by its short range – a few hundred kilometres, that is, within visual range from a high-flying aircraft. Over-the-horizon attacks were all but impossible: the Kh-22's seeker head could not find the target. In a real-life attack scenario against a carrier task force, the Tu-22M3s would have to break through fighter cover, inevitably suffering losses.

Raduga's new Kh-32 is the solution. While the Kh-22 climbs to 22000 m and accelerates to about 3600 km/h on the way to the target, the Kh-32 at first soars up almost to outer space (an altitude of some 44 km/27.3 miles), then 'looks beyond the horizon', detecting the target at 600 km or even 1,000 km range (372-621 miles). The warhead of the new missile is much 'smarter' – it can classify the targets and select the priority target (an aircraft carrier or a cruiser). Also, the Kh-32 closes on the target at much higher speed, which makes it almost impossible to intercept. In Russia that this missile and the Tu-22M3 modernised to carry it are considered a serious military deterrent and an effective weapon against the most powerful carrier task forces.

Tests of the Kh-32 were successfully completed back in the late 1990s. In so doing the Long-Range Aviation worked in close cooperation with the Navy, which willingly supplied decommissioned warships as targets. However, at the turn of the century the Tu-22M3 upgrade programme ground to a halt for lack of financing. Even now the Kh-32 has not been accepted for service, and modernisation of the *Backfires* goes extremely slowly, if at all.

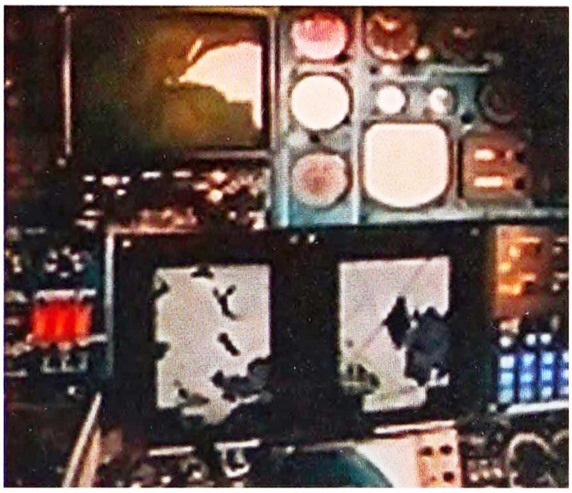
In October 2009 the Russian media informed that the Russian-Belorussian exercise *Zapad-2009* held in Belarus involved a number of modernised Russian Air Force aircraft, including upgraded Su-24M tactical bombers – and Tu-22M3 long-range bombers. It was said that both types were equipped with the SVP-24 computing subsystem (in particular, the Tu-22M3s had the SVP-24-22 variety) manufactured by the Russian enterprise Gefest & T based at Zhukovskiy. The system allows the bombers to use almost all new types of rocket and bomb armament, including weapons with course correction via satellite which considerably increases their accuracy and the bombers' combat efficiency. The subsystem works both with the Russian GLONASS satellite navigation system and with the American GPS. The types of weapons used in the exercise were not specified, but it is known 100% sure that the Russian Air Force has completed tests of satellite-guided bombs.

On 5th August 2009 the Russian news agency RIA Novosti news informed that, along with modernisation of existing strategic missile carriers and bombers, the Russian Ministry of Defence was developing a Future Long-Range Aviation Aircraft System (PAK DA) possessing qualitatively new characteristics. Russian Air Force C-in-C Col.-Gen. Aleksandr Zelin informed the press as follows: *'The Russian MoD is conducting active research to shape the outlook of the DA's future aviation complex. [...the new aircraft] will be able not only to fulfil its missions in conventional and nuclear wars much more effectively than existing strategic planes and to use a wide range of precision-guided munitions, but will also to possess a whole range of qualitatively new combat capabilities allowing it to implement absolutely new ways of deterrence'*. Zelin did not specify the projected aircraft's performance and anticipated development, testing and service introduction dates.

Two weeks later, on 19th August, the former Tupolev PLC General Director Igor' V. Shevchuk stated at the MAKS-2009 airshow that the Russian MoD and Tupolev had signed the contract for the development of an essentially new strategic bomber. *'This year we have signed a contract, so far regarding research and development work on the PAK DA. It is essentially new flying machine which will make use of the latest design features'* – said Shevchuk.

The Long-Range Aviation command also made a statement. The then Vice-Commander of the DA Maj.-Gen. Anatoliy D. Zhikharev (who was promoted to Commander just a month later) said: *'We have now issued a general operational requirement for the development of a new DA aviation system having no analogues in the world. R&D work on this aircraft is already included in this year's state budget.'*

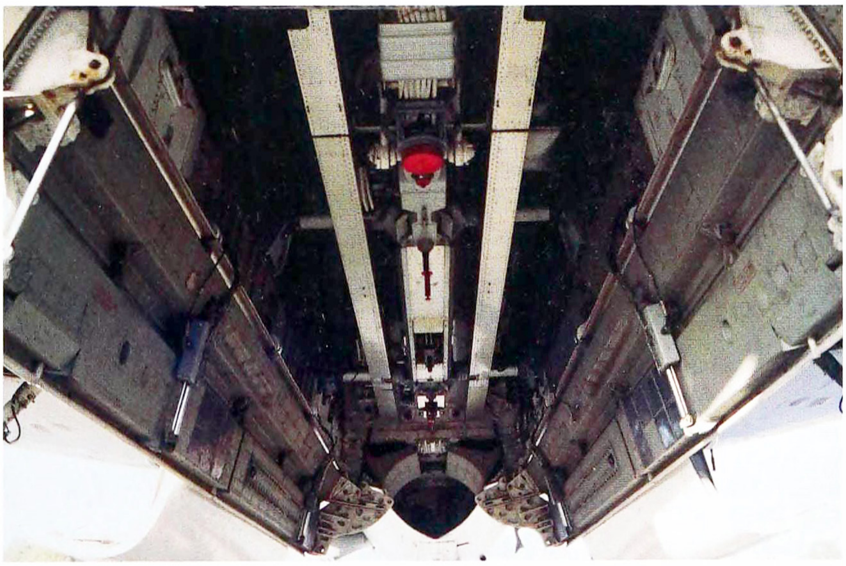
Commenting on the capabilities of the new aviation system, Zhikharev explained that *'it will be a totally different aircraft from what we have now'*. He said the bomber will have short-field and rough-field capability, be able to carry conventional and nuclear PGMs (missiles and bombs), to overcome any of air defence systems, to operate on overland and maritime TOs, in any weather and climatic conditions. According to Zhikharev, the aircraft will make wide use of stealth technologies reducing its RCS. Speaking about the development schedule, the general said that *'we know from experience that it takes ten years from the beginning of financing to the beginning of deliveries'*. However, he added that it all depended on the political will of the government and on uninterrupted financing of the programme.

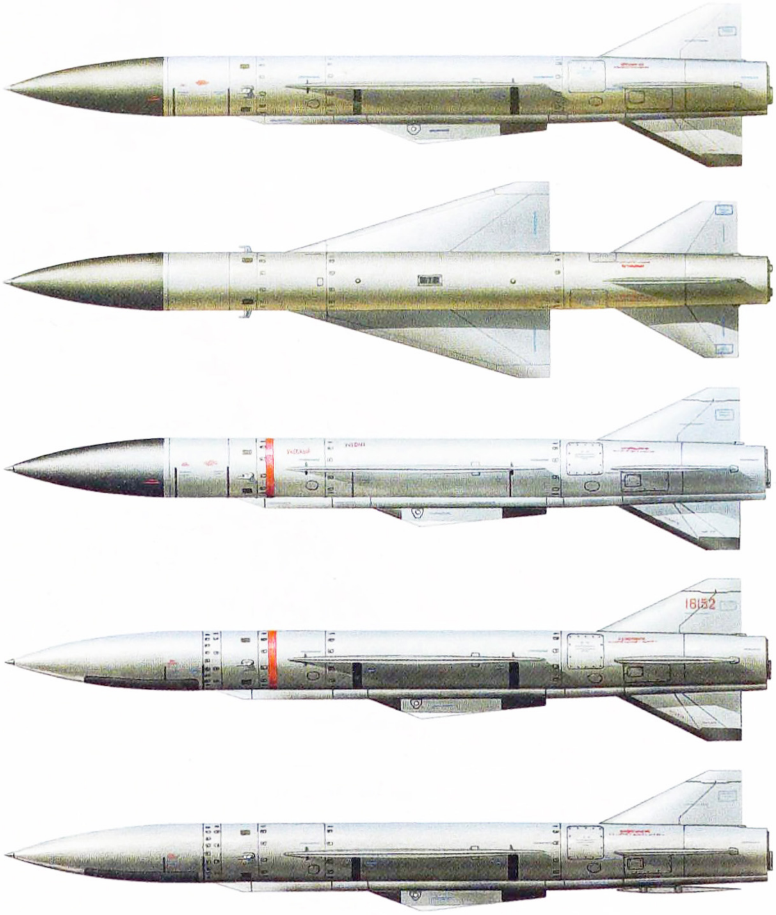

The displays of the SVP-24-22 computing system fitted to a Tu-22M3.

The first funds for the PAK DA which is to replace the current strategic bomber fleet were assigned in 2008, although work on the programme had begun a long time before. As early as 1999 it was declared that work on the project of a strategic bomber – a successor to the Tu-95MS and Tu-160 – had begun. Originally the new aircraft was to be ready by 2010, but the plan turned out to be too optimistic. One of the reasons for the failure is the absence of an indigenous engine meeting the airframer's requirements.

The cited words of Gen. Zhikharev on the future Russian strategic strike aircraft may be commented upon as follows.

It is clear that the range of the PAK DA is defined by the ability of the weapons system as a whole (aircraft + cruise missile) to reach the targets on the territory of the potential adversary. Thus, the required combat radius of a future strategic bomber is largely defined by the maximum launch range of its cruise missiles. The high guaranteed probability of


The weapons bay of a Tu-22M3, looking towards the nose. Note the BD-45F missile pylon and the double-hinged bay doors (the inboard portions fold inwards when a missile is carried.)

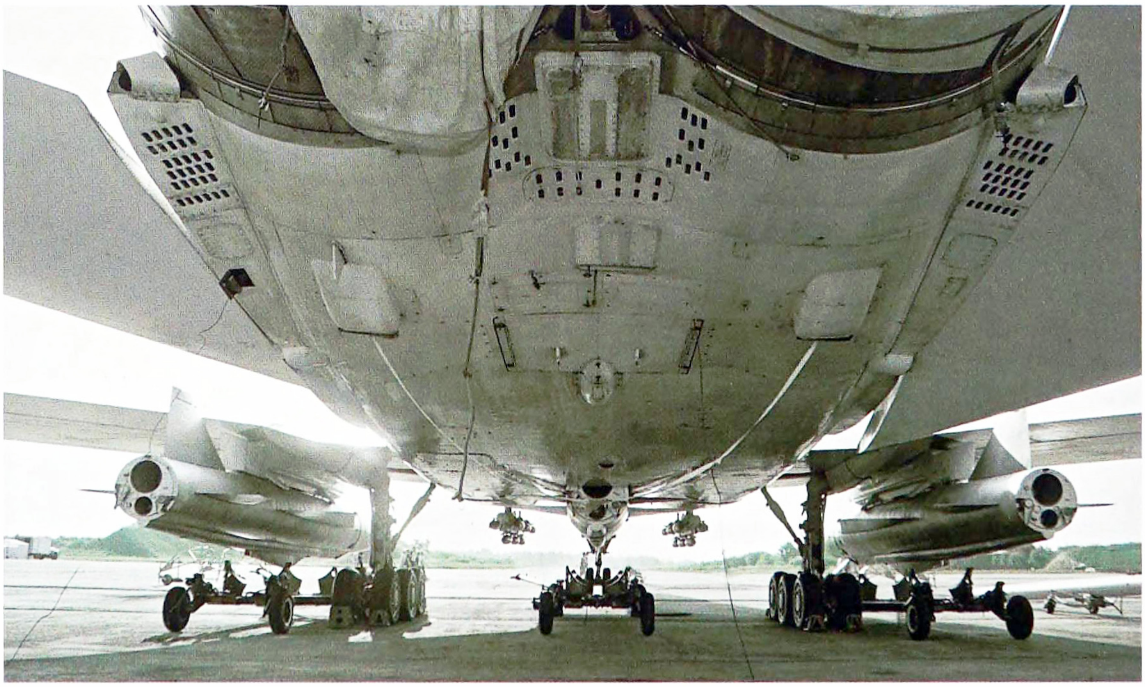


Top to bottom: A live Kh-22N, an inert Kh-22N training round, an inert Kh-22NA and a live Kh-22NA with the ventral fin folded.

weapons being used against strategic targets will be ensured first of all by the high survivability of the weapons system, which should be reached first of all by launching precision-guided low-level cruise missiles from outside the enemy air defence's 'kill zone'. Any attempts to penetrate the air defence system, even by a stealth aircraft, considerably reduce the chances of success.

A high survival rate on the ground is equally important for the Russian strike aircraft. This requirement is due to the possibility of the enemy making a pre-emptive nuclear strike. It is no secret, after all, that now the DA's aircraft are all deployed at several well-known airbases, which will surely be targeted. The forward operating locations and dispersal airfields, which are few, are also known to the potential adversary. Thus, none of the current three types of strategic missile carriers can be based at Class 2 airfields with short runways or operate from dirt strips. Thus, the possibilities of basing the Russian Long-Range Aviation's aircraft are severely limited now. This deficiency (also influencing survivability of a strategic weapons system) will be taken into account when developing the PAK DA.

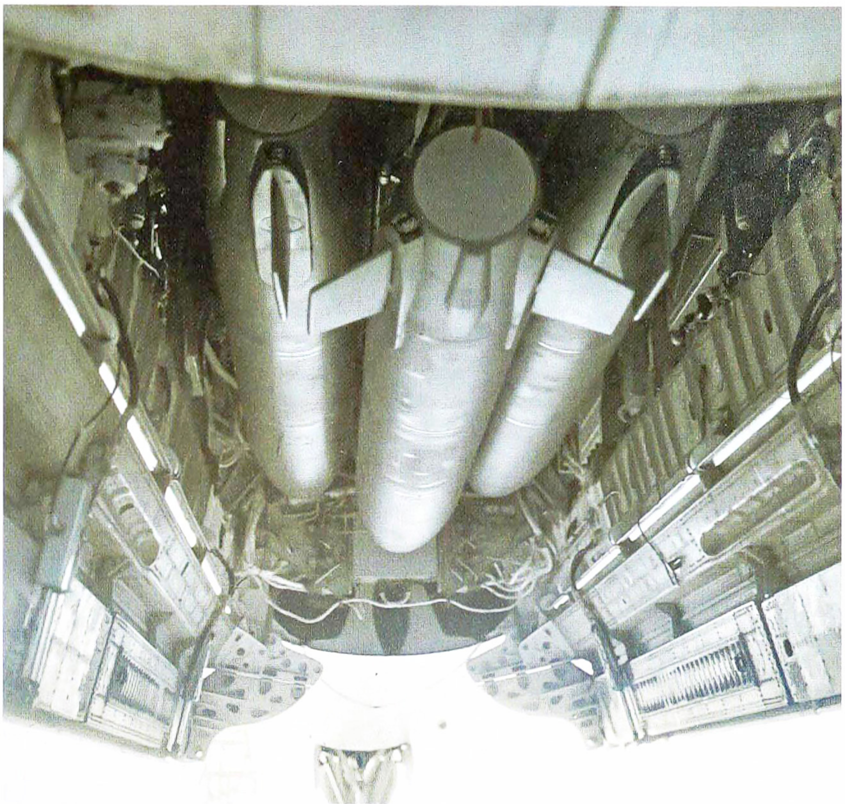
The PAK DA programme is set to run until 2015, when the prototype is to make its first flight. The military have issued their operational requirements to the Tupolev PLC. It is obvious that the programme is meant to solve a range of problems, which include giving an adequate answer to the development of a 'regional' bomber in the USA, replacing the ageing Tu-22M3 bombers, and supplementing (and, in the long term, possibly replacing) the Tu-160. As far as is known, deliveries of the future American bomber to the USAF are to commence in 2018; this ties in well with the PAK DA's new development and production entry schedule.



A Tu-22M3 with a rather unlikely warload of three Kh-22 missiles and two MERs with bombs.

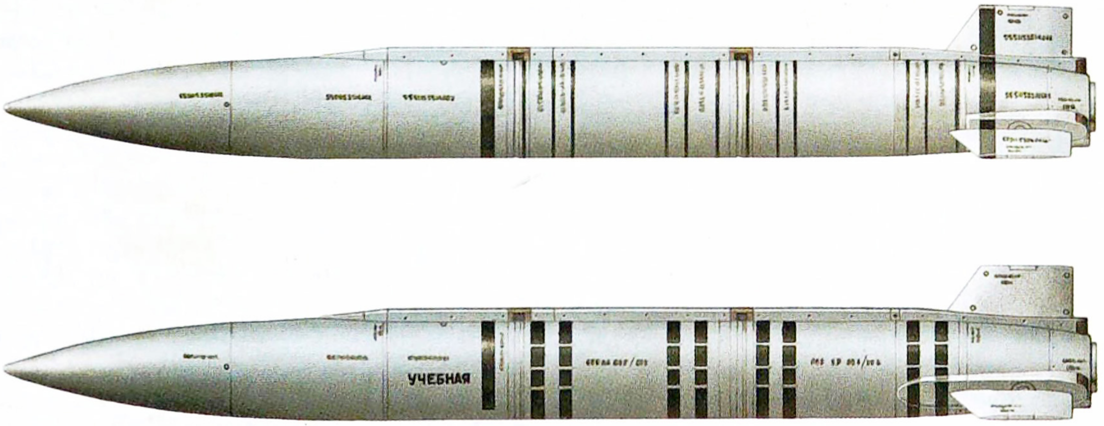
It has been declared that the new aircraft will continue the ideology of the Tu-160 and will not be similar to the American Northrop B-2 stealth bomber, which has a 'flying wing' layout. However, make no mistake – the PAK DA will by no means be merely a warmed-over *Blackjack*; this will be an all-new aircraft embodying the latest know-how, the most advanced structural materials, systems, avionics and weapons. Its performance is to meet the anticipated operational requirements for 2015-2030.

The Tupolev PLC has the greatest experience among the Russian aircraft design offices in developing strategic aviation strike weapon systems. Work on several projects similar to the B-2 was conducted in the 1980s and 1990s but was then suspended in the mid-1990s for various reasons (primarily due to insufficient financing). Two known Russian aviation companies – Tupolev and Sukhoi – were working on a programme codenamed B-90 (that is, bomber for the 1990s). By the end of the 1990s the new policy of the Russian government in the field of aircraft engineering had started to lead to specialisation of aircraft manufacturers. Tupolev, having the greatest experience in long-range bomber development, began to specialise in strategic aircraft in its military field of activities, whereas Sukhoi concentrated on tactical aircraft. In the 1990s, even amid the economic chaos that set in after the demise of the USSR and recession of industrial production in Russia, Tupolev did not stop working on strategic aviation systems utilising the latest technologies. It was solely the lack of financing that kept these programmes from being further developed. Thus, the Tupolev PLC, which is now the main contractor for the PAK DA programme, has not only been able to make use of the big reserve of unrealised ideas but also received the long-awaited financing.



Kh-15 missiles on a rotary launcher in the weapons bay of a Tu-22M3.

To conclude this chapter it is necessary to say that, despite the shocks which the Russian Long-Range Aviation has suffered since the disintegration of the USSR, at the end of 2009, in the midst of reforms, it nevertheless represents a force to be reckoned with. It is hard to give an unambiguous answer to whether the Russian DA has a technical potential modern enough for performing the tasks formulated in the current military doctrine of the Russian Federation. However, the aspiration of the nation's leaders to strengthen and modernise the aviation component of Russia's strategic nuclear forces is obvious and this aspiration is hampered only by the financial factor.



Live (top) and inert training versions of the Kh-15 missile.

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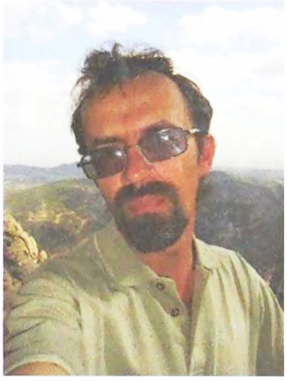

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